

BIM FOR DESIGN

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* Architectural Drawing Production

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* Clash Detection and Coordination

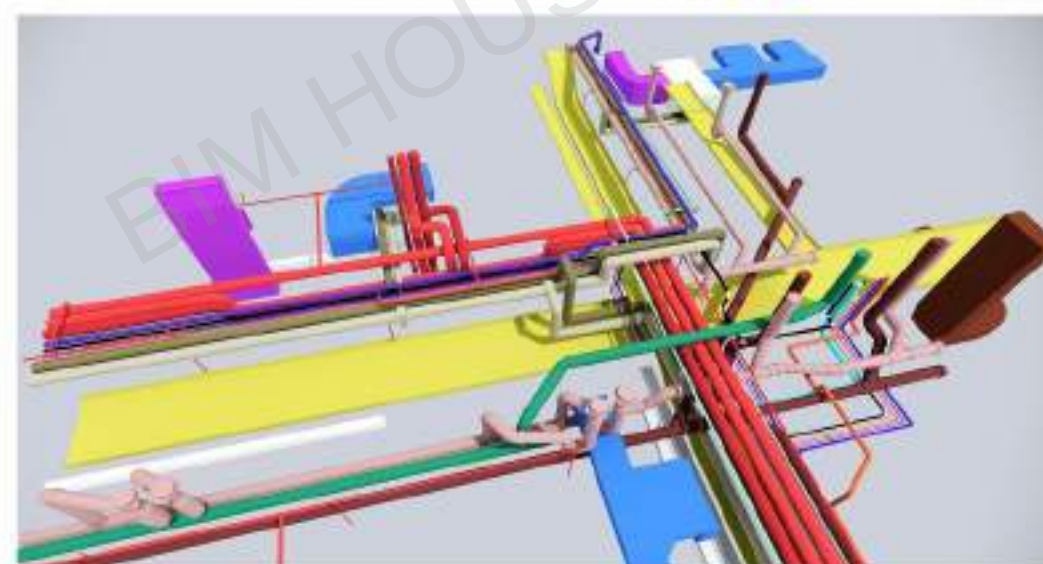
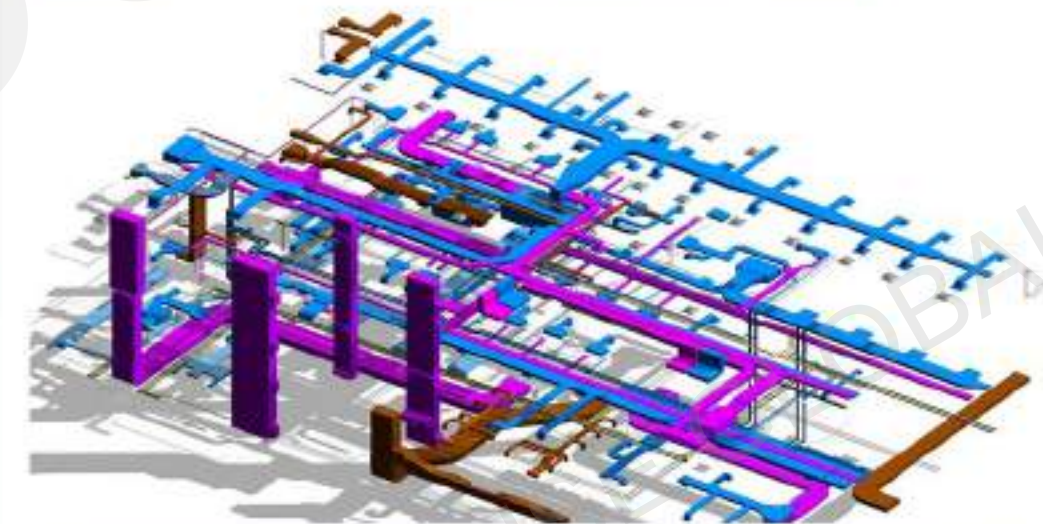
Clash Report
Clash Resolved Report

* Combined Services Drawing HVAC GFC Drawings

GF Plan_HVAC
Part Plan & Section

* Quantities takeoff

HVAC
Plumbing
Electrical
Firefighting
External Site Plan

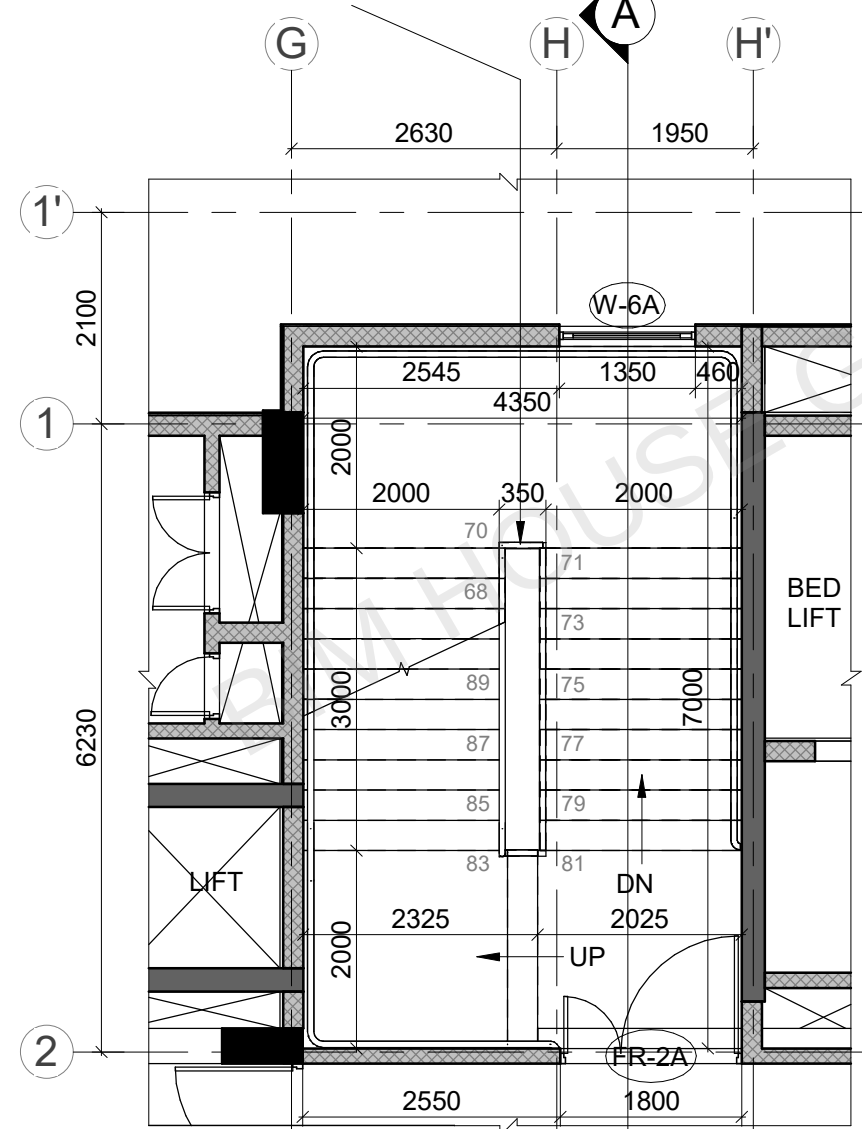




ARCHITECTURAL DRAWING PRODUCTION

NOTES	Dimensions are not to be scaled.		
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	This drawing should not be referred for any other purpose		
No.	Date	By	Description
Issues			
No.	Date	By	Description
Revisions			
			
Key Plan			
Client			
Architects			
☐			
Structural Consultant			
☐			
MEP Consultant			
☐			
BIM Consultant			
BIM HOUSE GLOBAL Pvt. Ltd. Projects Consulting Training BC-108, Matrix Tower, Opp. Jaypee Hospital, Sector-132, Noida-201304			
Project Title			
Drawing Title			
STAIRCASE DETAIL_1			
Date	05-Aug-2019		Project No.
Drawn by	Author		Drawing No.
Checked by	Checker		ST_1
Approved by	Approver		

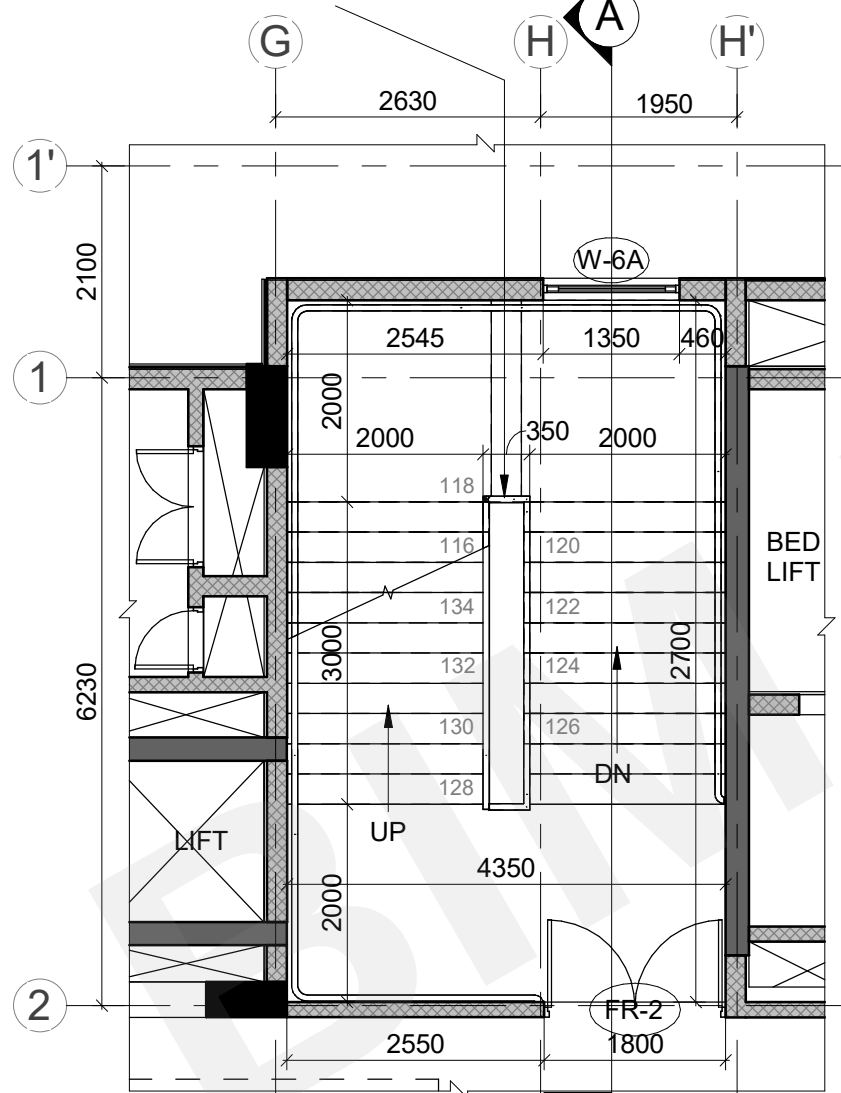
62MM DIA. SS HOLLOW PIPE HANDRAIL @ 1000MM HT.
FROM FFL WITH 40MM DIA. SS BALUSTRADE



3 SECOND FLOOR LVL_PLAN AT (+)8300
1 : 75

STAIRCASE - ST-02
SIZE - AS/DRWG.
WIDTH = 2000MM
TREAD = 300MM
RISERS = 26 EQ. RISERS @ 167.3MM EACH
FLOOR HT. = 4350MM

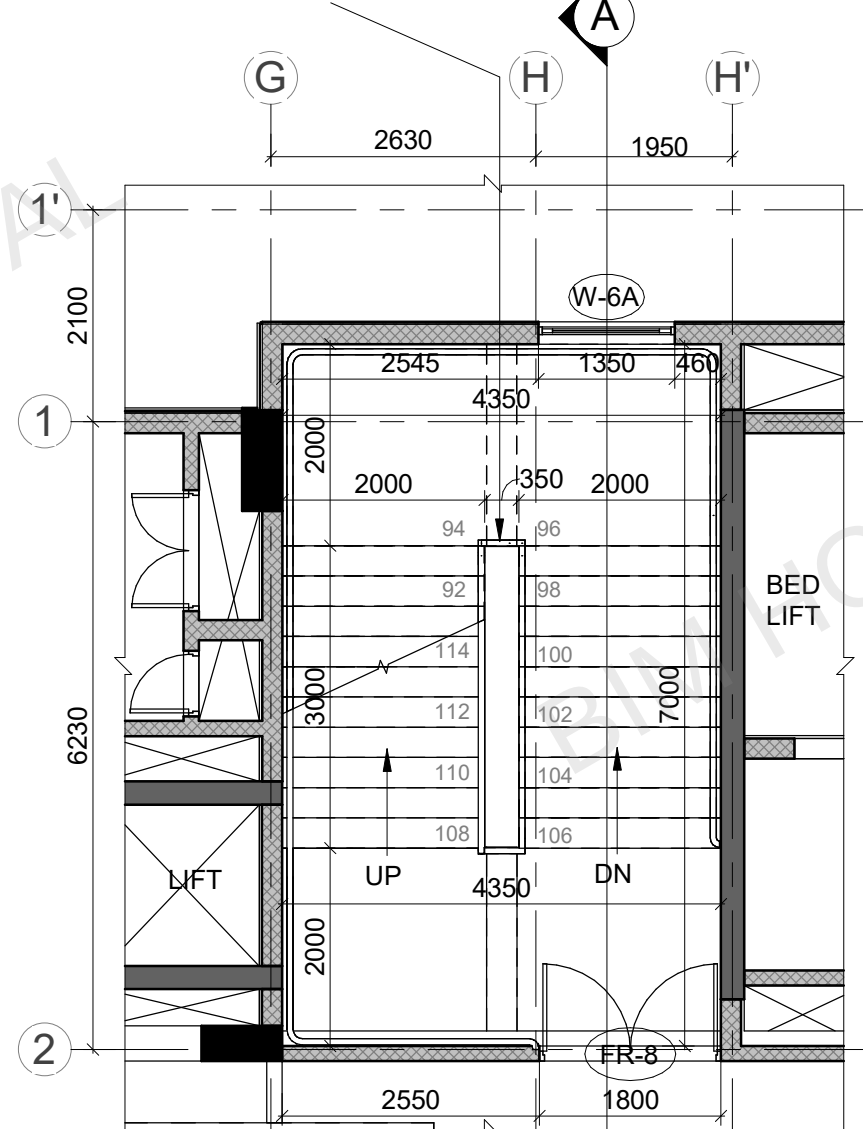
62MM DIA. SS HOLLOW PIPE HANDRAIL @ 1000MM HT.
FROM FFL WITH 40MM DIA. SS BALUSTRADE



5 THIRD FLOOR LVL_PLAN AT (+)15575
1:75

STAIRCASE - ST-02
SIZE - AS/DRWG.
WIDTH = 2000MM
TREAD = 300MM
RISERS = 24 EQ. RISERS @ 151.04MM EACH
FLOOR HT. = 3625MM

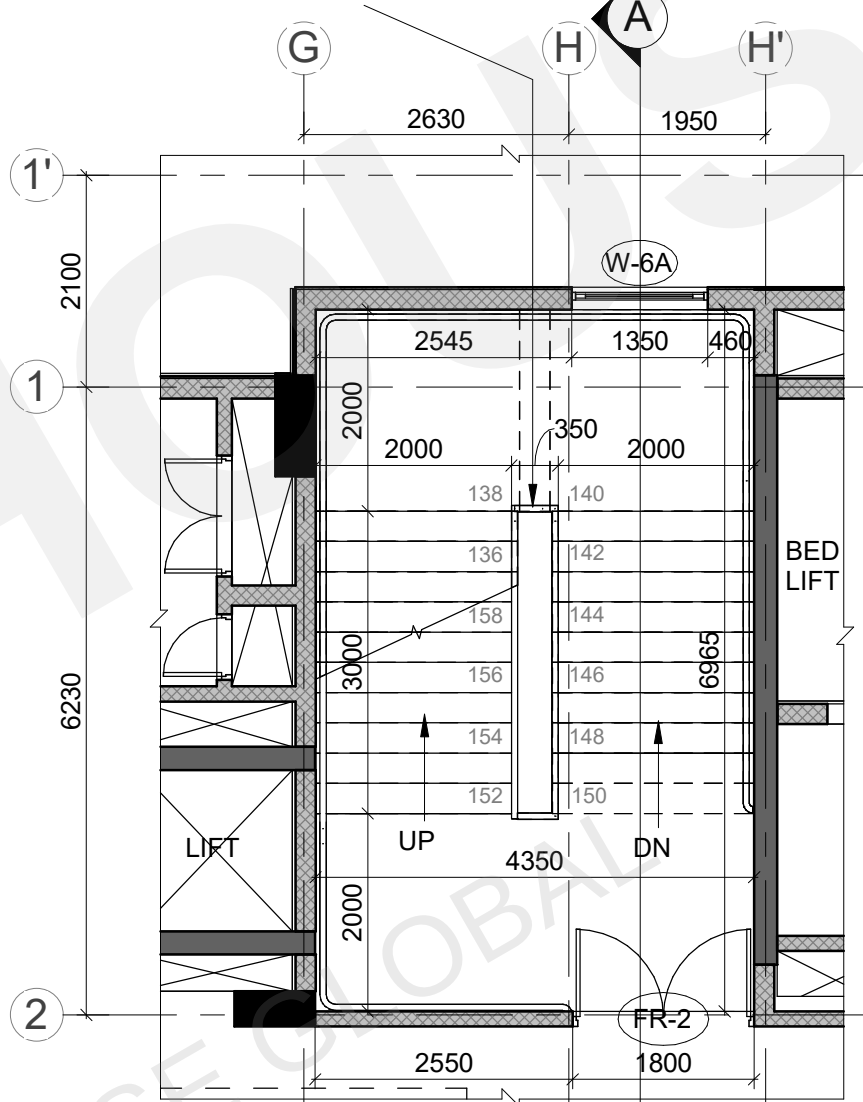
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FROM FFL WITH 40MM DIA. SS BALUSTRADE



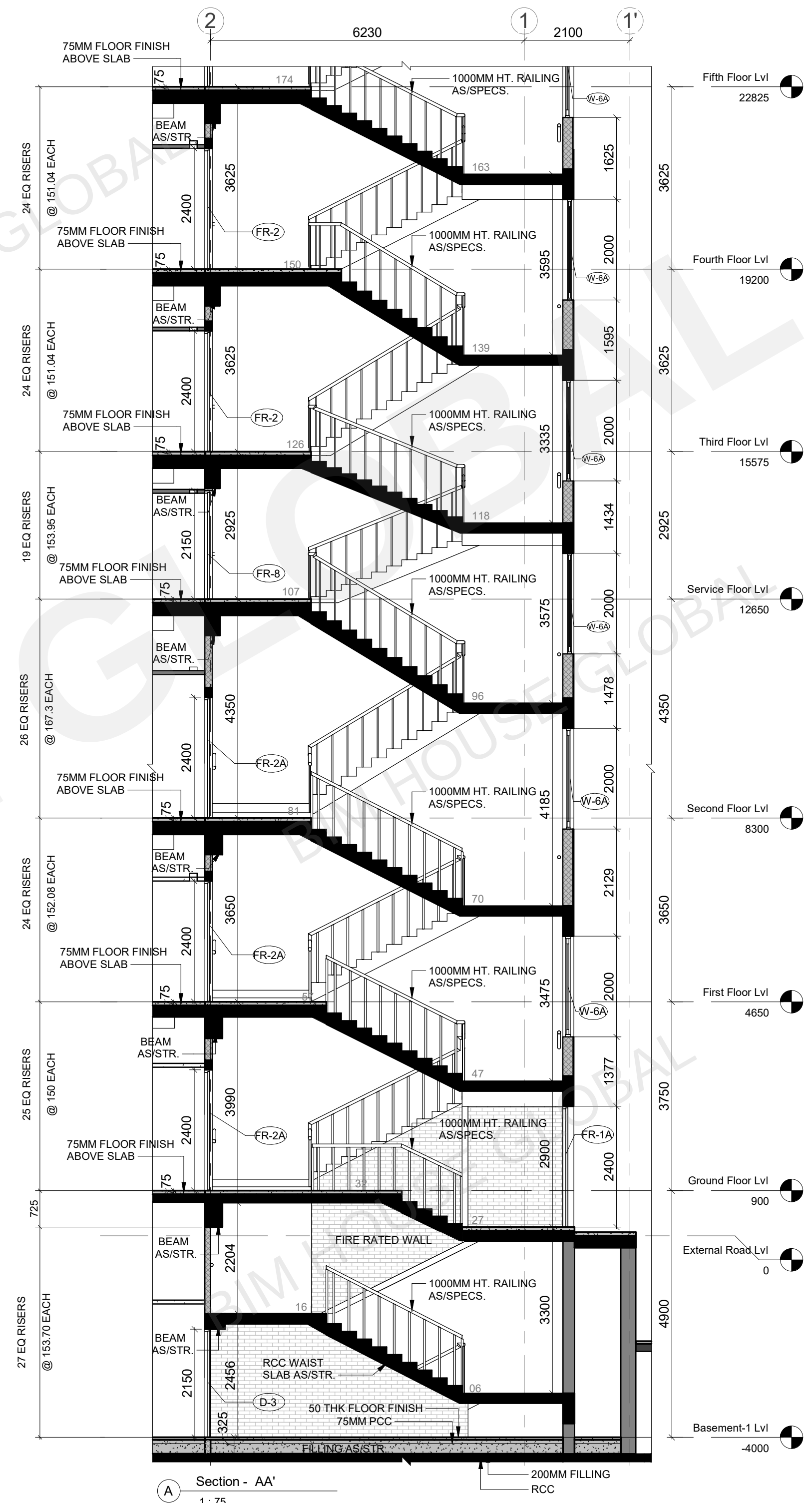
4 SERVICE FLOOR LVL_PLAN AT (+)12650
 1:75

STAIRCASE - ST-02
 SIZE - AS/DRWG.
 WIDTH = 2000MM
 TREAD = 300MM
 RISERS = 19 EQ. RISERS @ 153.95MM EACH
 FLOOR HT. = 2925MM

62MM DIA. SS HOLLOW PIPE HANDRAIL @ 1000MM HT.
FROM FFL WITH 40MM DIA. SS BALUSTRADE



6	FORTH FLOOR LVL_PLAN AT (+)19200 1:75
STAIRCASE - ST-02 SIZE - AS/DRWG. WIDTH = 2000MM TREAD = 300MM RISERS = 24 EQ. RISERS @ 151.04MM EACH FLOOR HT. = 3625MM	



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No.	Date	By	Description
Issues			

No.	Date	By	Description
Revisions			



Key Plan

Client

Architects	☐
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Structural Consultant	☐
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MEP Consultant ☐

BIM Consultant

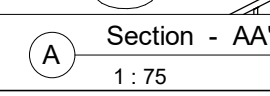
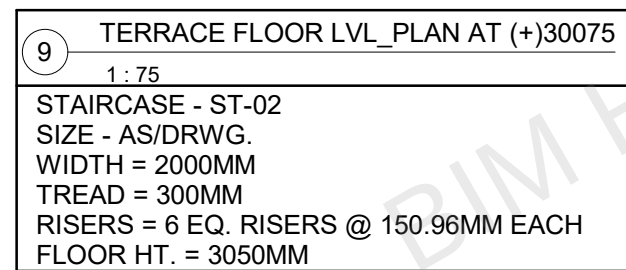
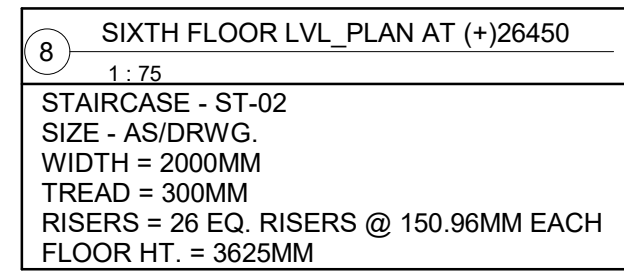
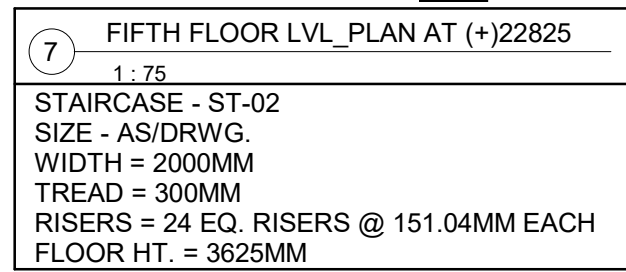
BIM HOUSE GLOBAL Pvt. Ltd.
Projects | Consulting | Training

BC-108, Matrix Tower, Opp. Jaypee
Hospital, Sector-132, Noida-201304

Project Title

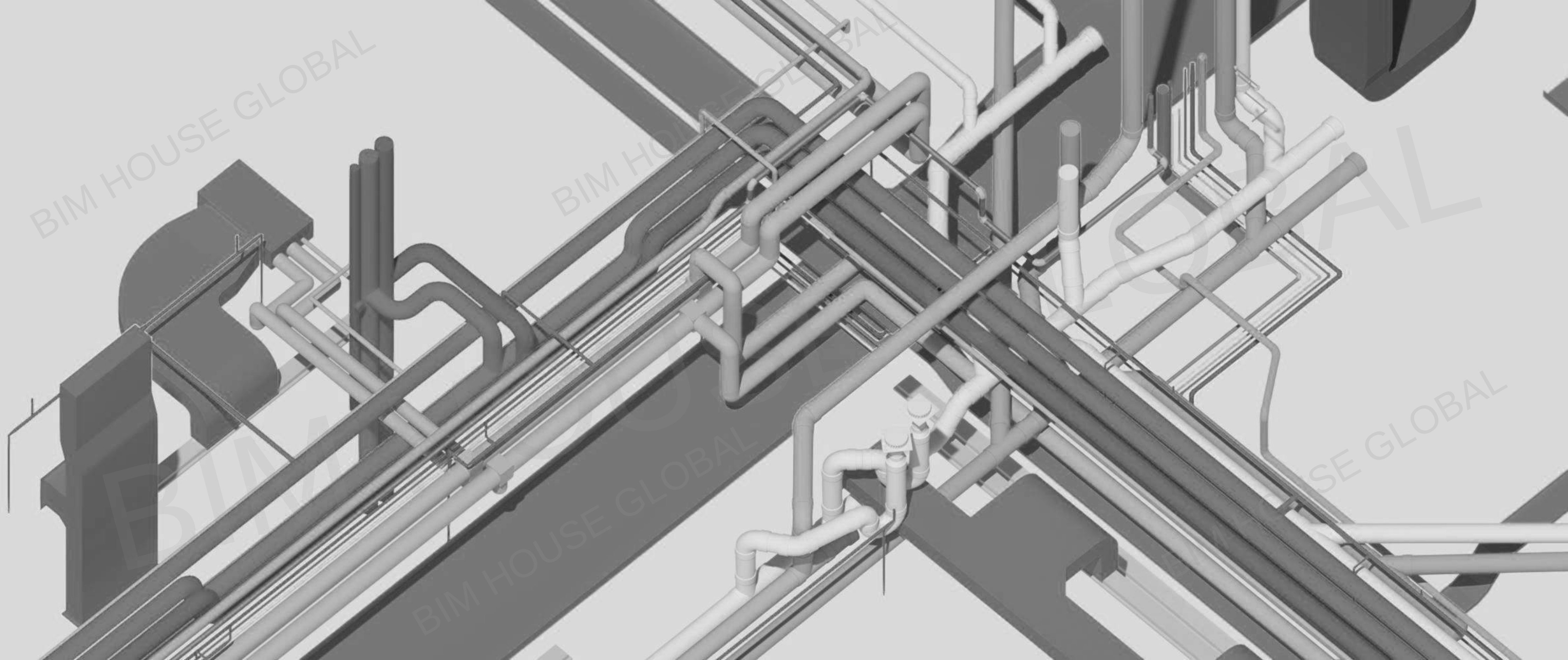
Drawing Title
STAIRCASE DETAIL_2

Date	05-Aug-2019	Project No.
Drawn by	Author	Drawing No. ST_2
Checked by	Checker	
Approved by	Approver	



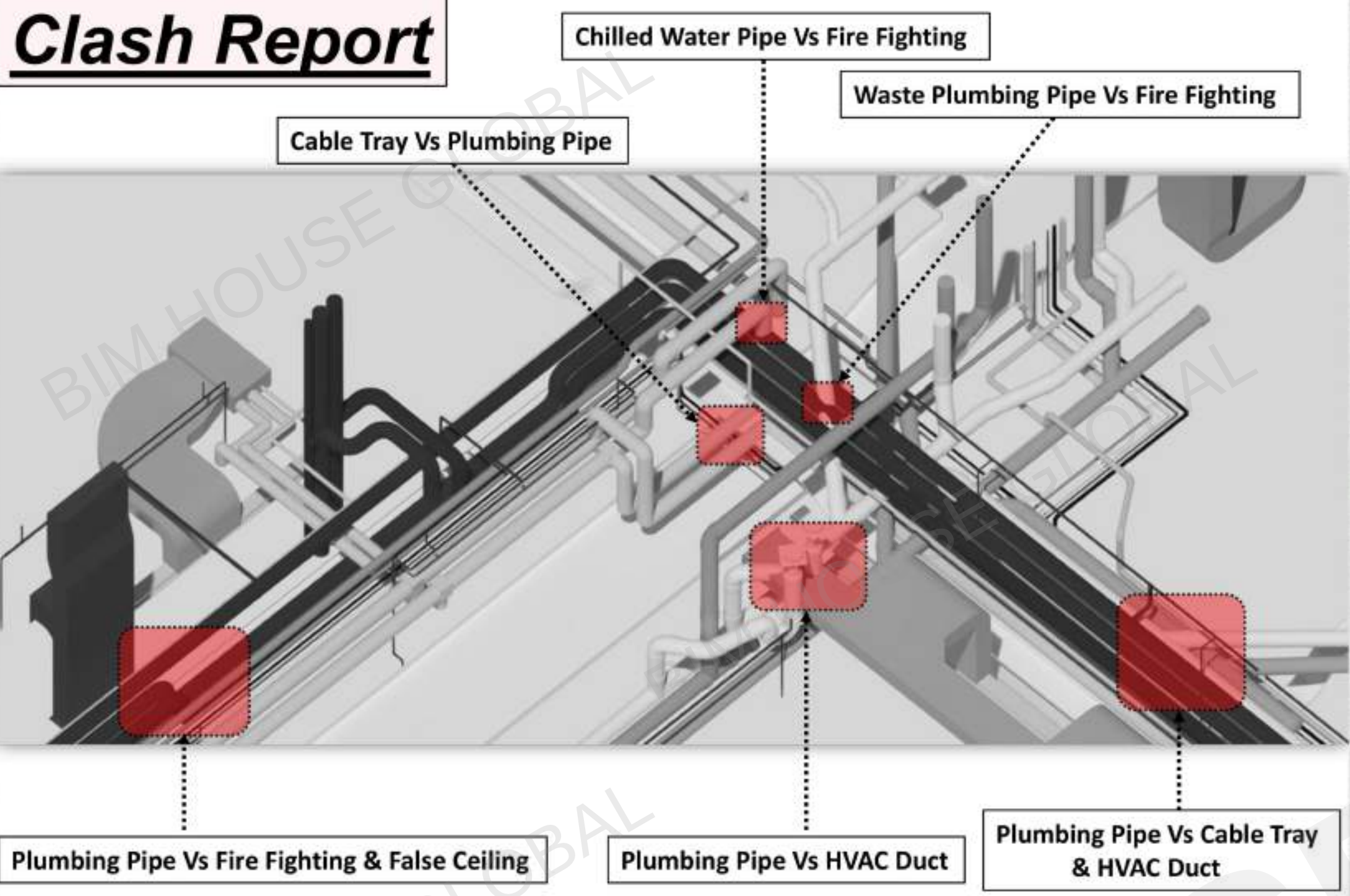
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No.	Date	By	Description
Issues			
No.	Date	By	Description
Revisions			
			
Key Plan			
Client			
Architects ☐			
Structural Consultant ☐			
MEP Consultant ☐			
BIM Consultant ☒			
BIM HOUSE GLOBAL Pvt. Ltd. Projects Consulting Training BC-108, Matrix Tower, Opp. Jaypee Hospital, Sector-132, Noida-201304			
Project Title			
Drawing Title			
STAIRCASE DETAIL_3			
Date		05-Aug-2019	
Project No.			
Drawn by		Author	
Drawing No.		ST_3	
Checked by		Checker	
Approved by		Approver	

NOTES	Dimensions are not to be scaled.		
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No.	Date	By	Description
Issues			
No.	Date	By	Description
Revisions			
			
Key Plan			
Client			
Architects ☐			
Structural Consultant ☐			
MEP Consultant ☐			
BIM Consultant ☒			
BIM HOUSE GLOBAL Pvt. Ltd. Projects Consulting Training BC-108, Matrix Tower, Opp. Jaypee Hospital, Sector-132, Noida-201304			
Project Title			
Drawing Title			
STAIRCASE DETAIL_4			
Date	05-Aug-2019		Project No.
Drawn by	Author		Drawing No.
Checked by	Checker		ST_4
Approved by	Approver		



CLASH DETECTION AND COORDINATION

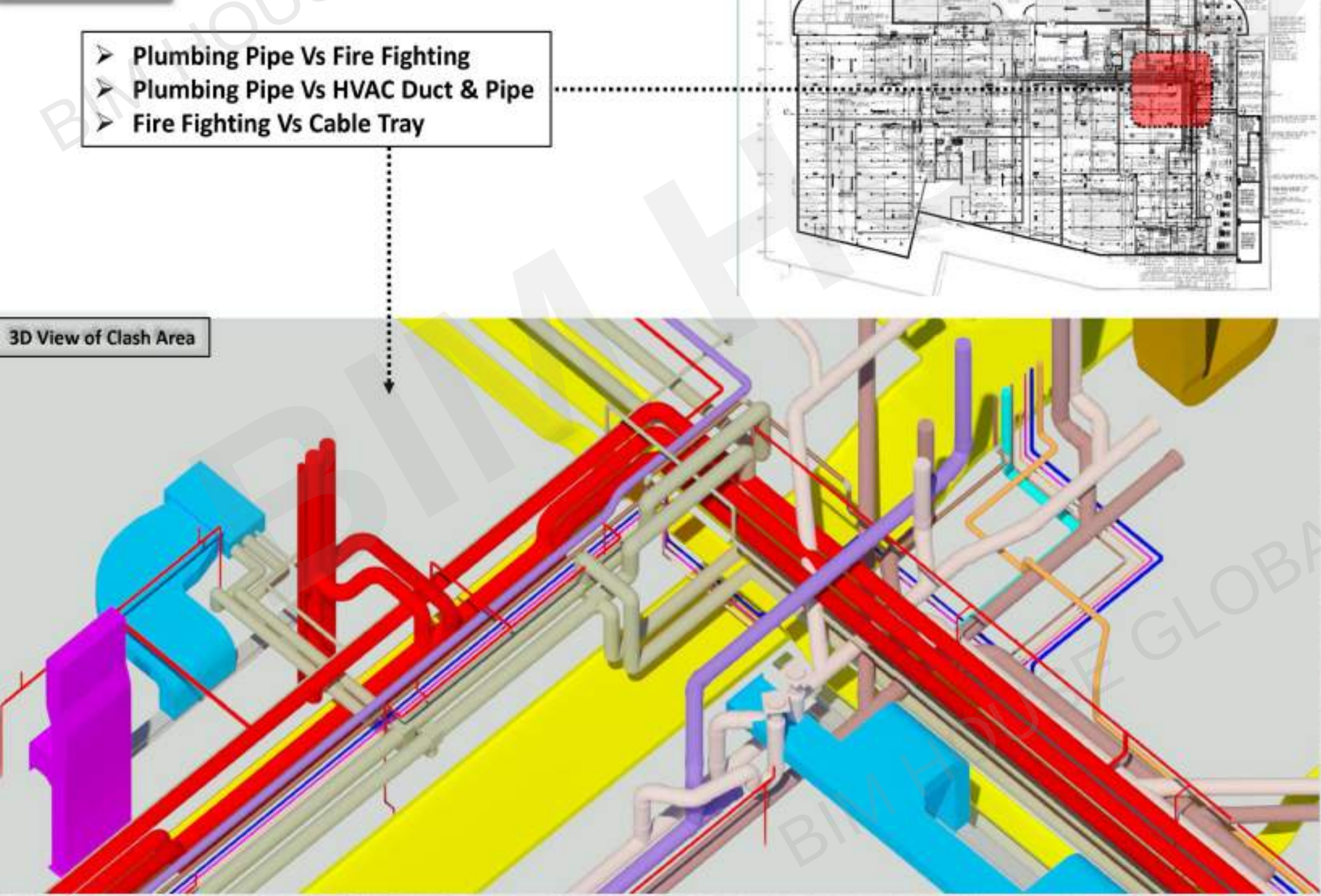
Clash Report



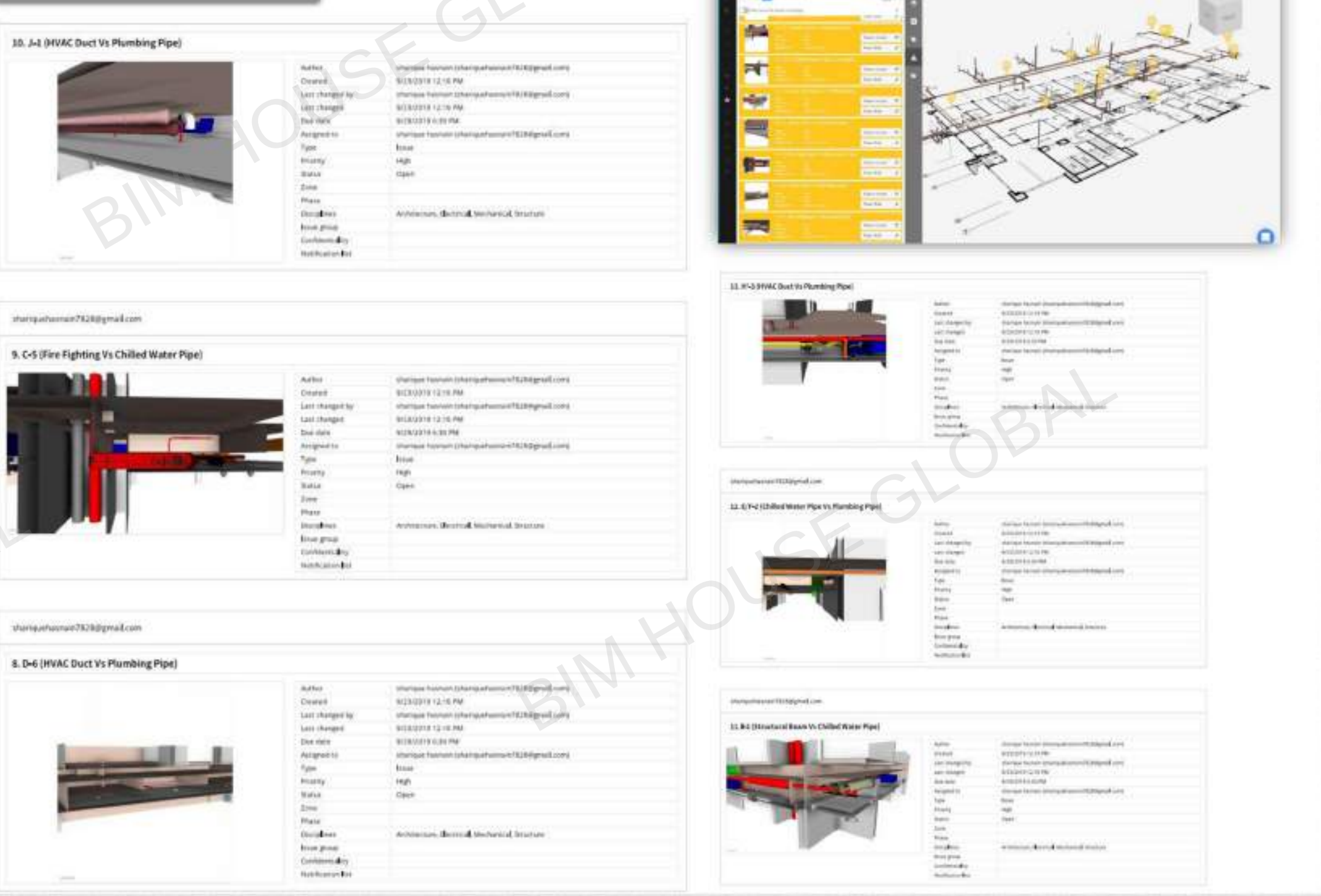
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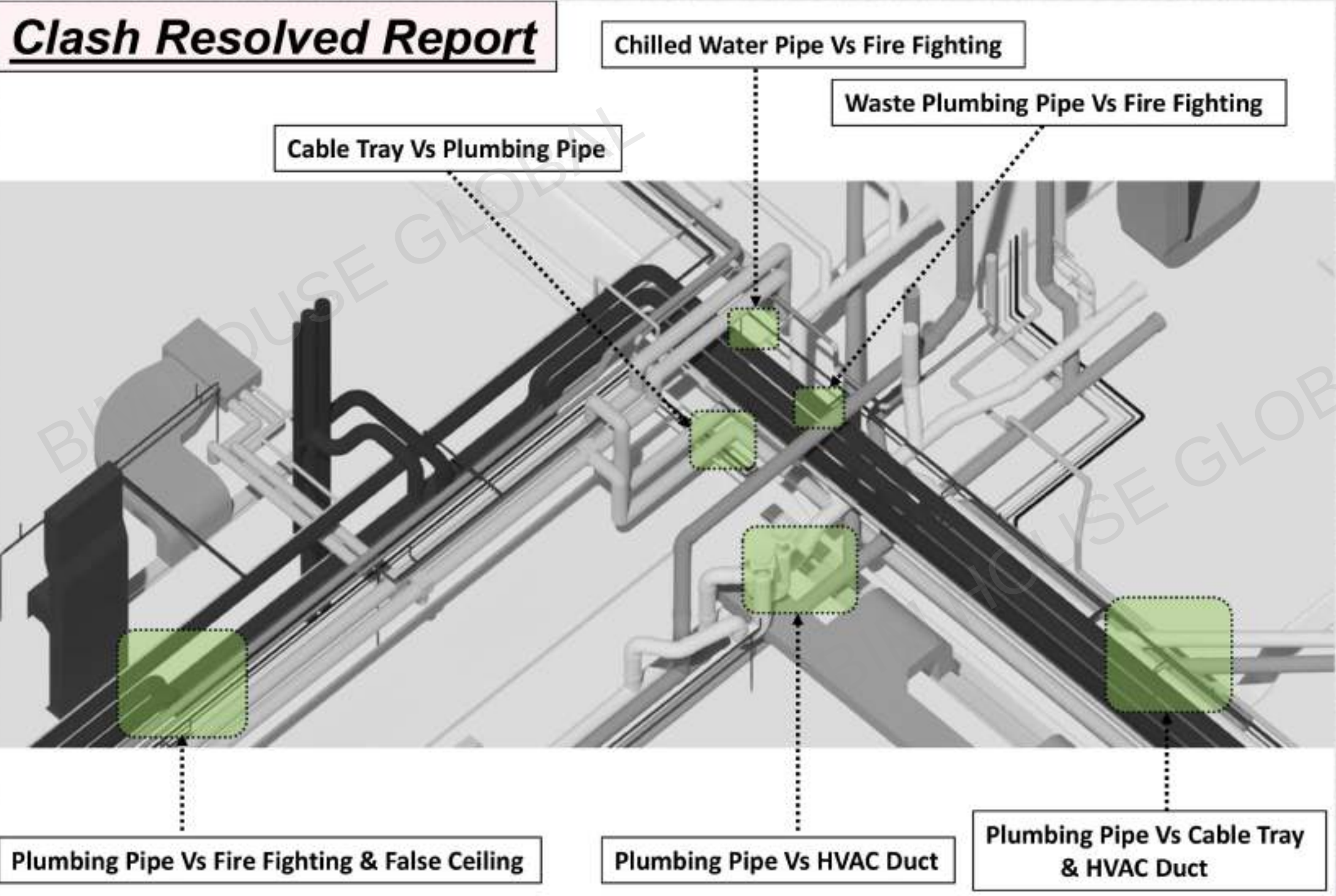
Clash View



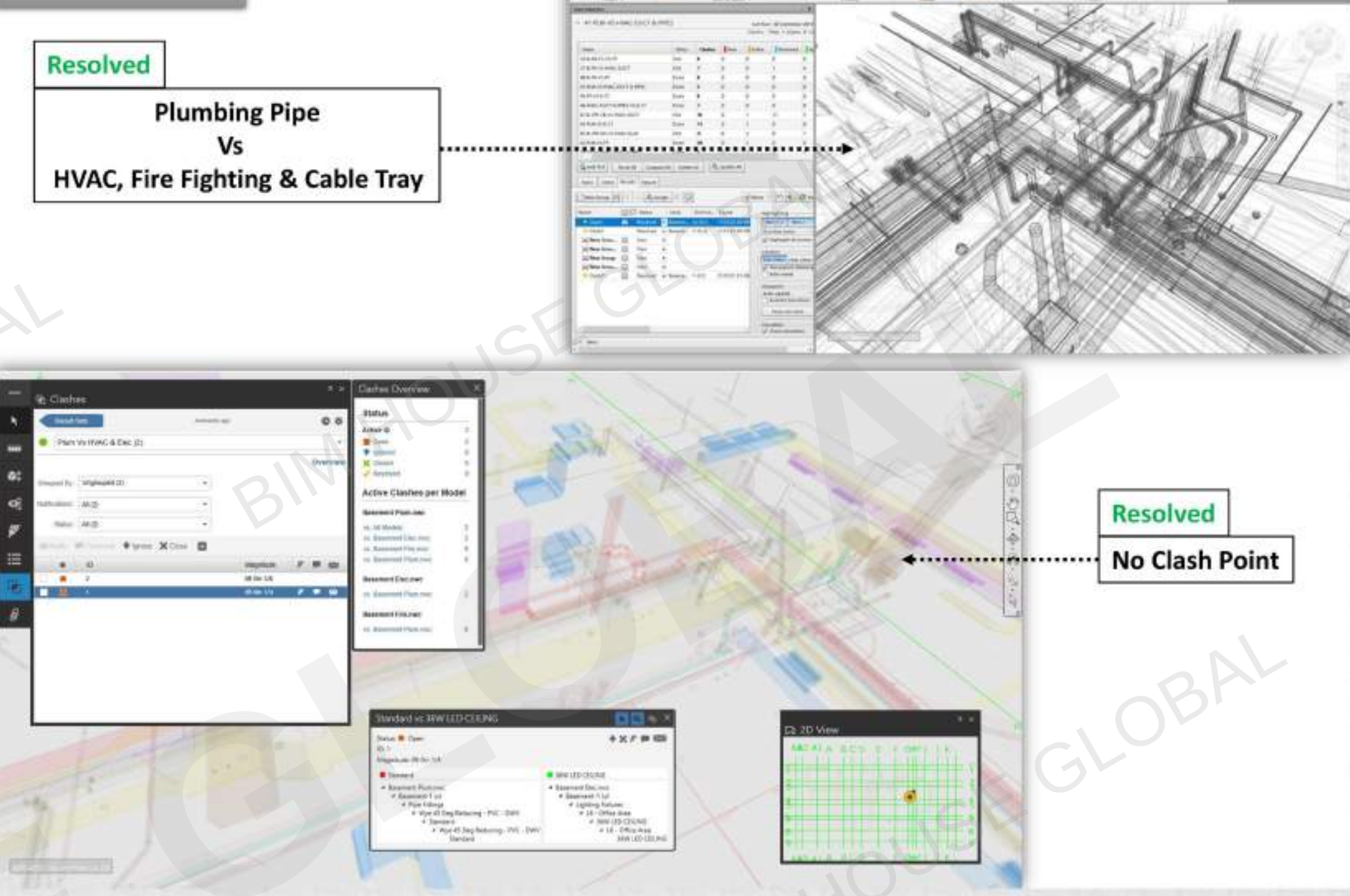
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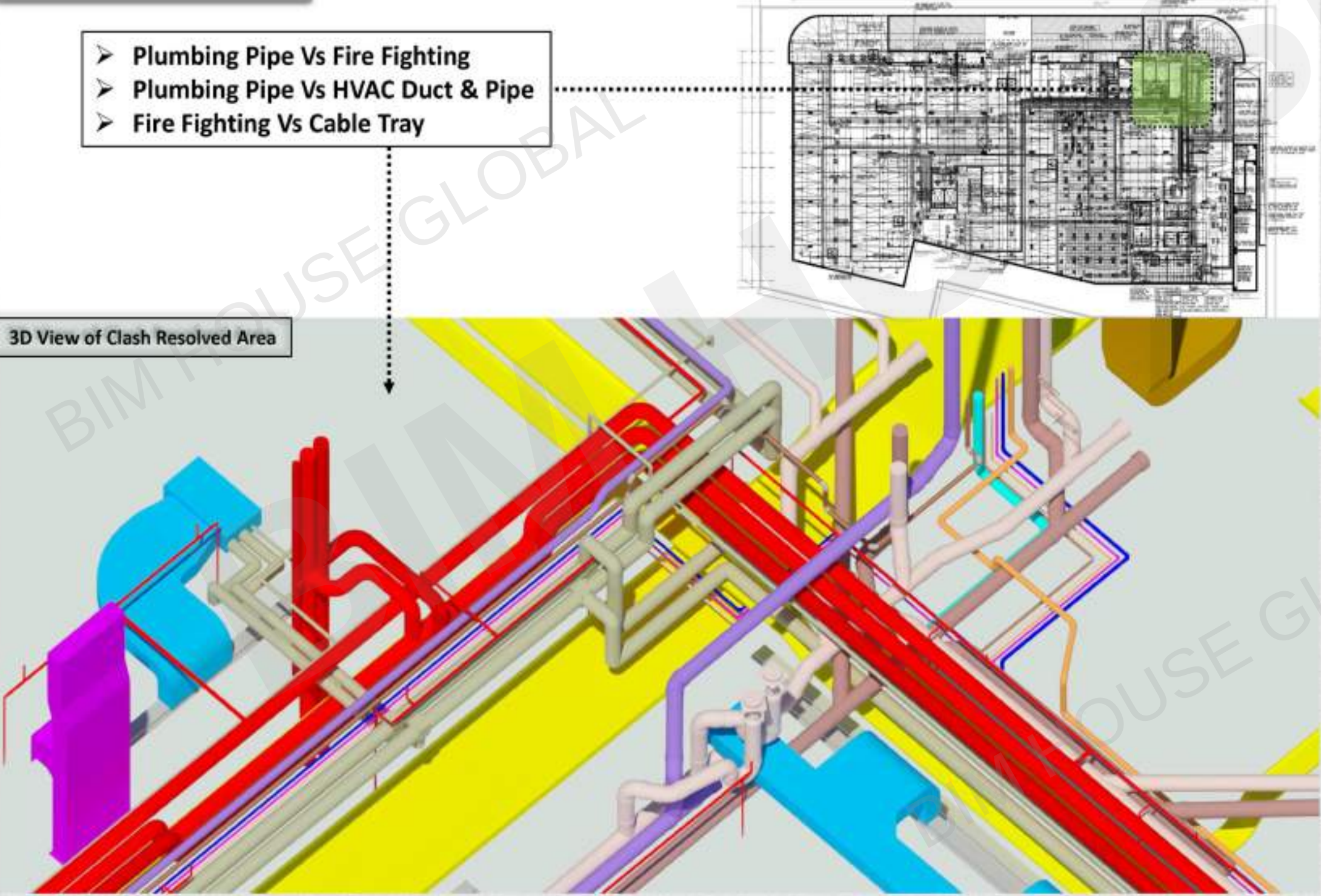
Clash Resolved Report



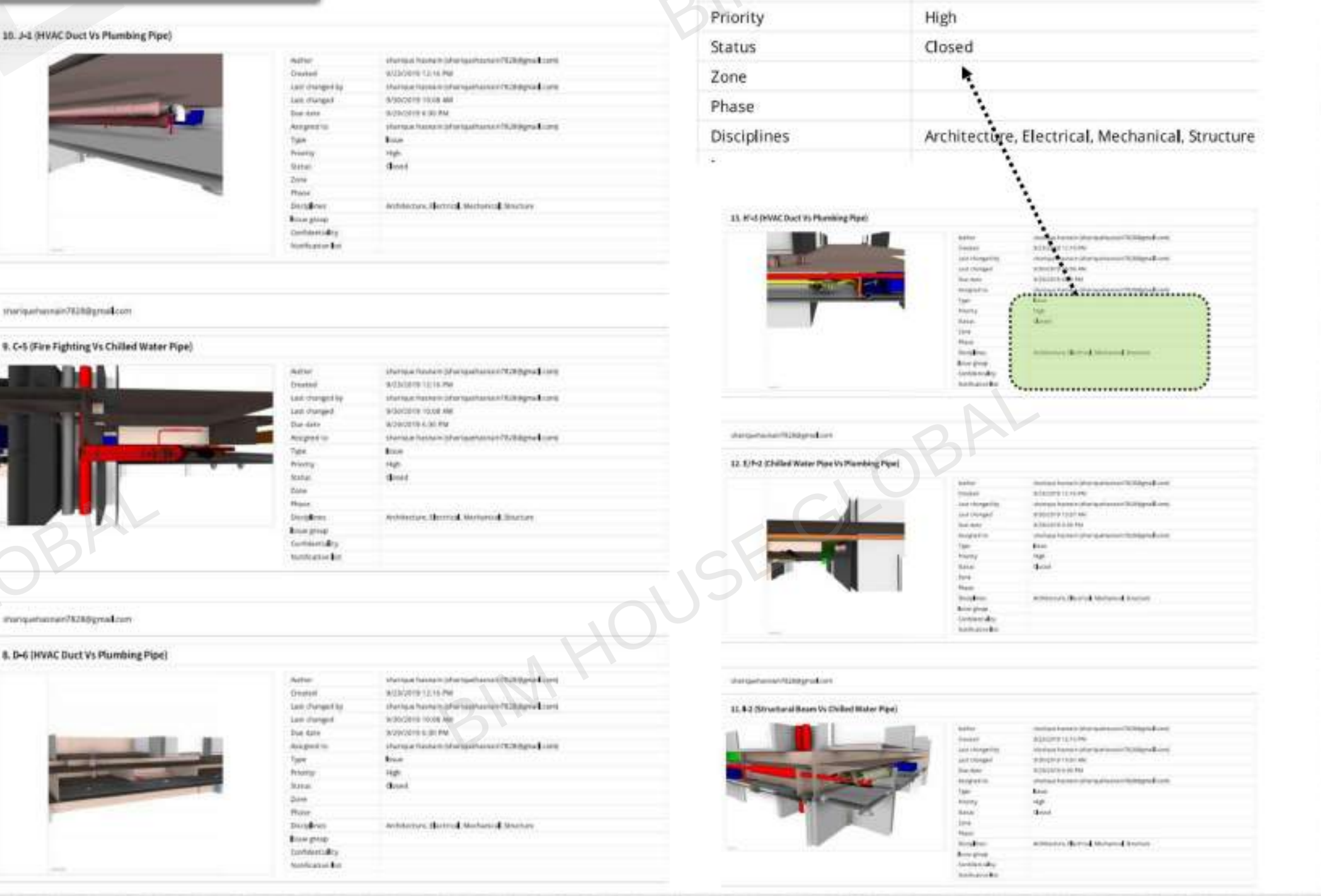
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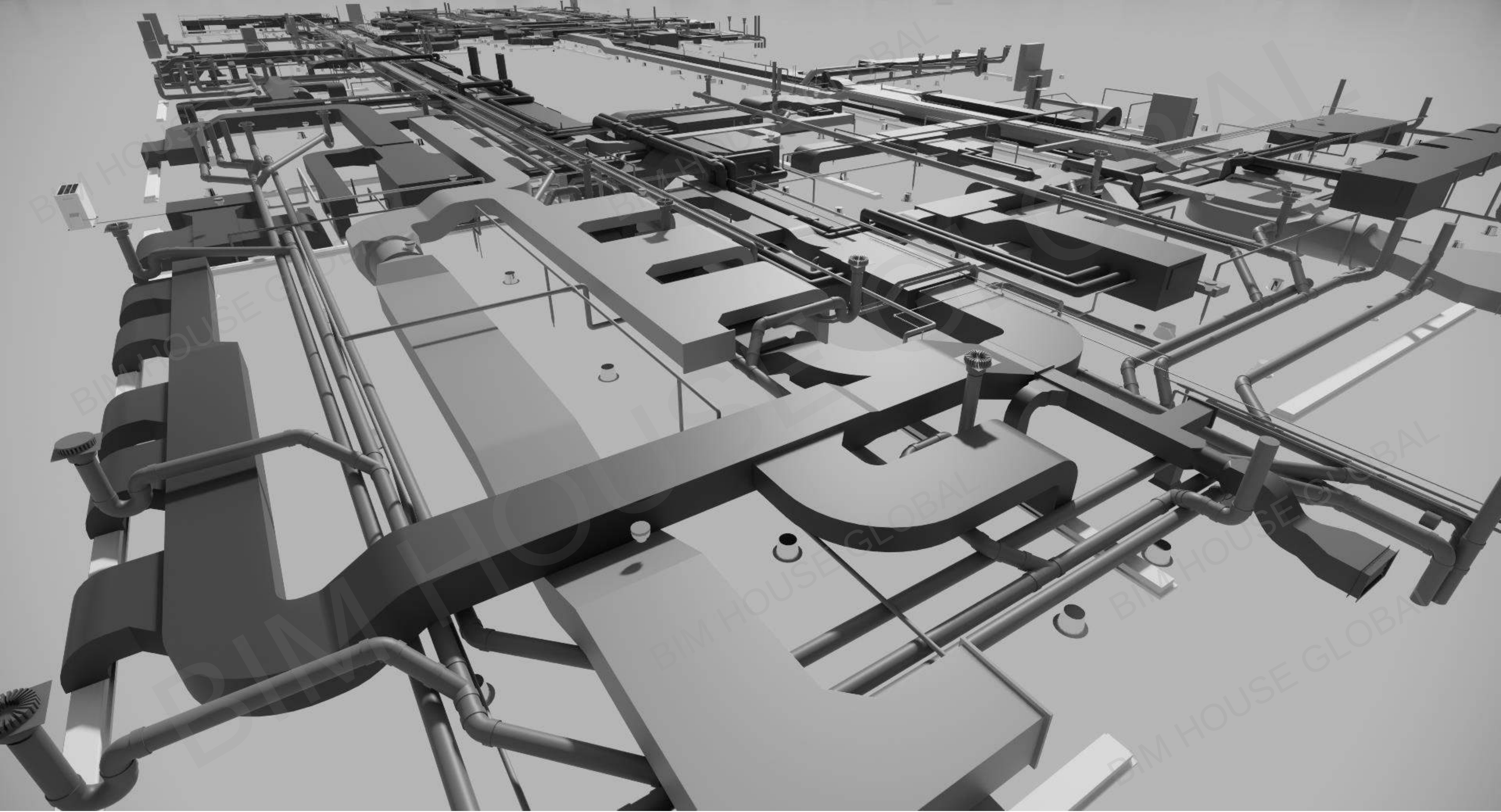


Clash Resolved View



Clash Documentation

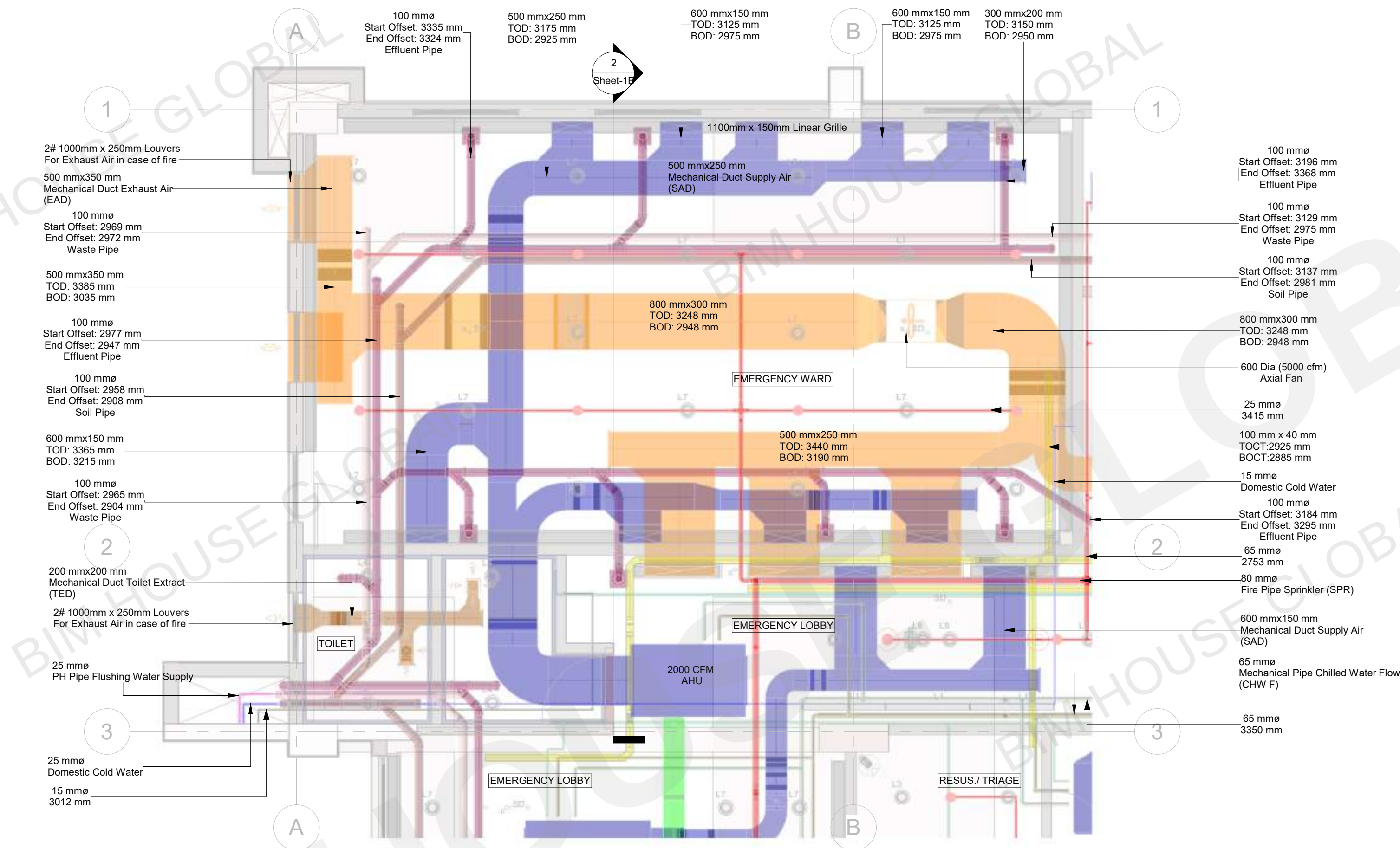




COMBINED SERVICES DRAWING HVAC GFC DRAWINGS



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No.	Date	By	Description
Issues			
No.	Date	By	Description
Revisions			
LEGEND HVAC Return Air Duct (RAD) Exhaust Air Duct (EAD) Fresh Air Duct (FAD) Supply Air Duct (SAD) Toilet Extract Duct (TED) Chilled Water Flow Pipe (CHW-F) Chilled Water Return Pipe (CHW-R) Condensate Pipe (CD)			
Key Plan			
TOD:- Top of Duct			
BOD:- Bottom of Duct			
Client			
Architects			
Structural Consultant			
MEP Consultant			
BIM Consultant			
BIM HOUSE GLOBAL Pvt. Ltd.			
Projects Consulting Training			
BC-108, Matrix Tower, Opp. Jaypee Hospital, Sector-132, Noida-201304			
Project Title			
Drawing Title			
Ground Floor			
Plan_HVAC_Part-01			
Date		Project No.	
Drawn by		Drawing No.	
Checked by		B102.1b	
Approved by		Approver	



1 Part Plan- Emergency Room
1 : 50

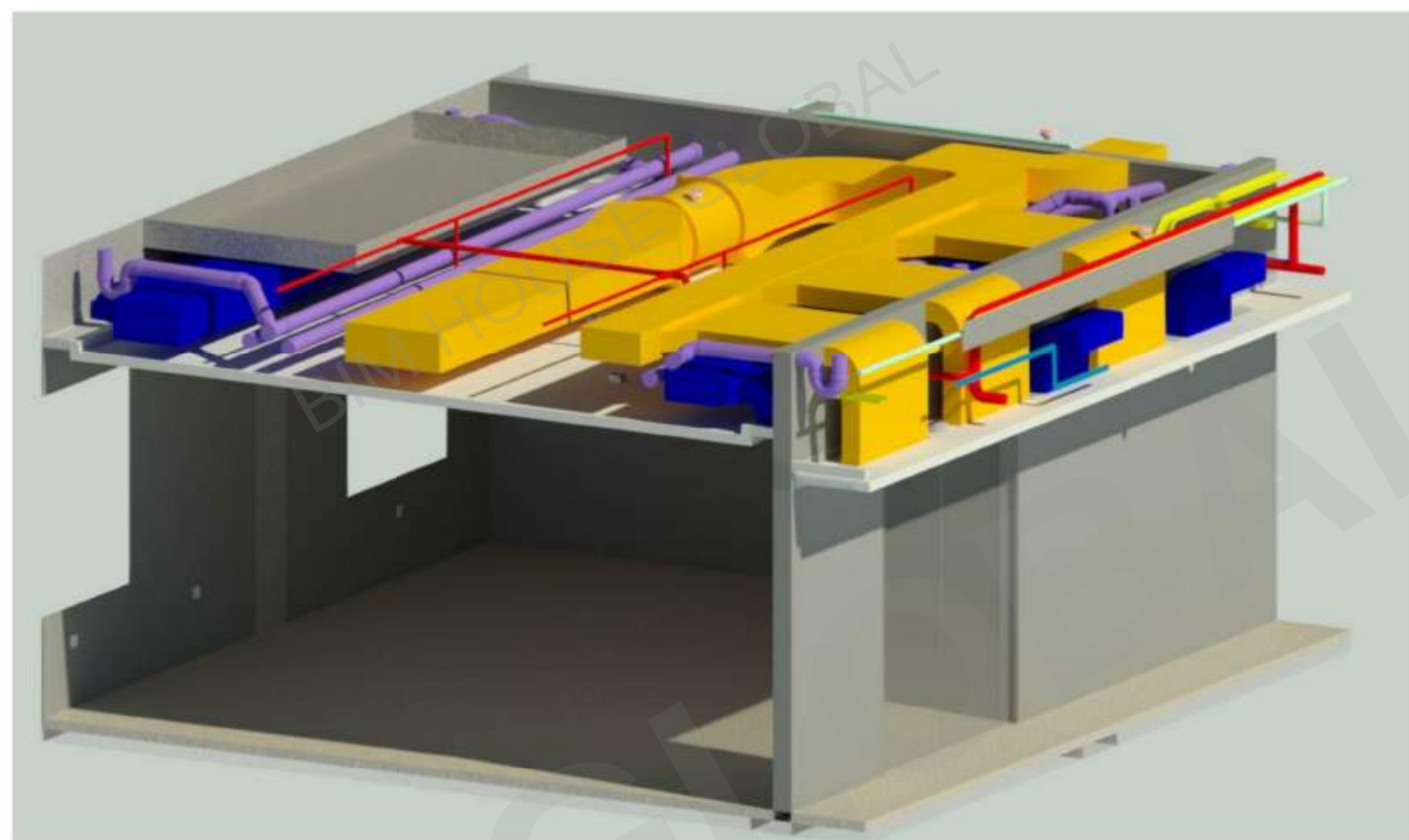
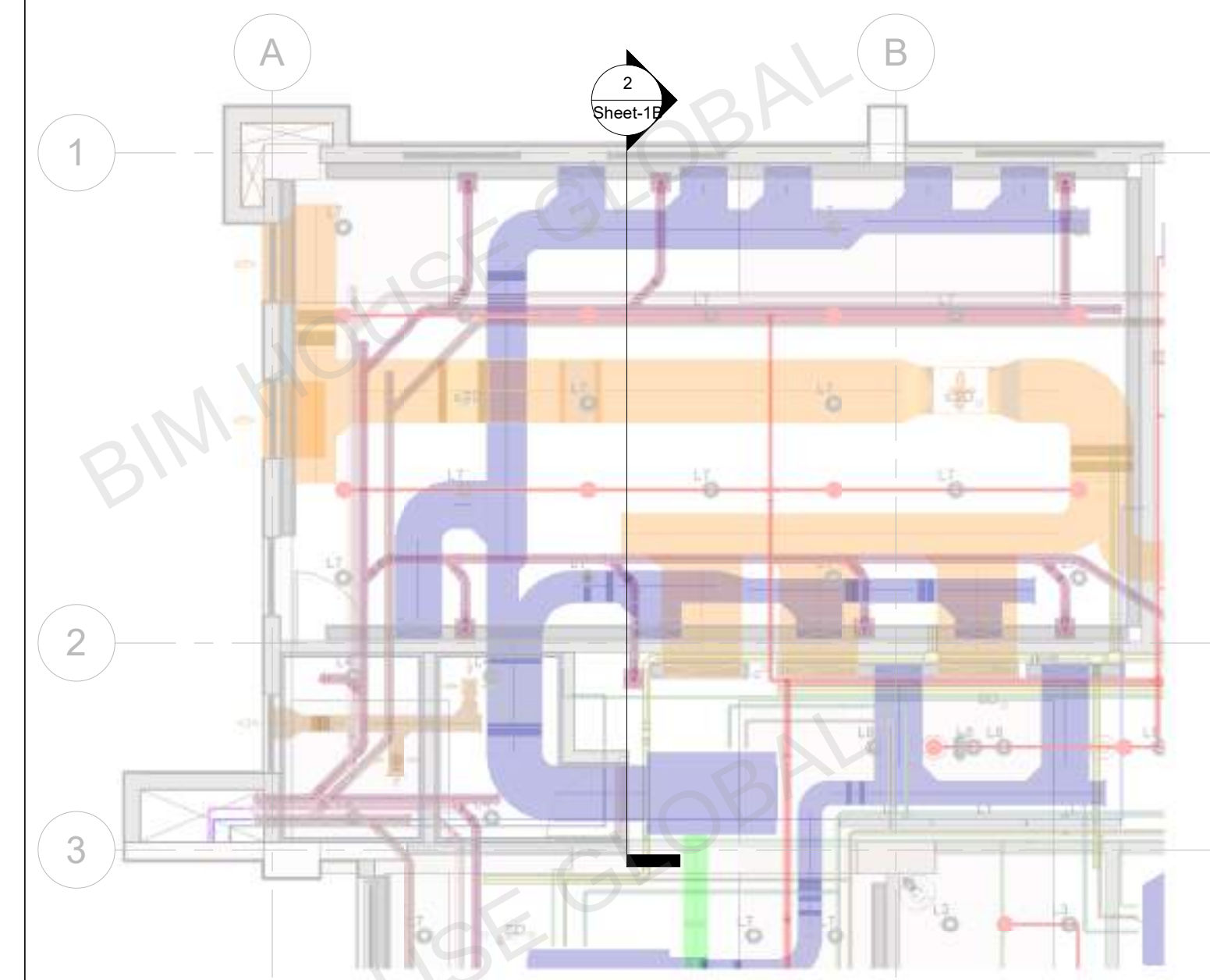
Duct Schedule			
System Type	Family	Area	Count
Mechanical Duct Exhaust Air (EAD)	Rectangular Duct	242 m ²	63
Mechanical Duct Fresh Air Intake (FAD)	Rectangular Duct	262 m ²	245
Mechanical Duct Fresh Air Intake (FAD)	Round Duct	0 m ²	1
Mechanical Duct Make-Up Air Intake (MAD)	Rectangular Duct	126 m ²	8
Mechanical Duct Return Air (RAD)	Rectangular Duct	2 m ²	2
Mechanical Duct Supply Air (SAD)	Rectangular Duct	411 m ²	308
Mechanical Duct Toilet Extract (TED)	Rectangular Duct	27 m ²	66
Grand total: 693		1070 m ²	693

Pipe Schedule		
Size	System Type	Length
20 mmø	Mechanical Pipe Chilled Water Flow (CHW F)	67.814 m
25 mmø	Mechanical Pipe Chilled Water Flow (CHW F)	10.961 m
32 mmø	Mechanical Pipe Chilled Water Flow (CHW F)	52.148 m
40 mmø	Mechanical Pipe Chilled Water Flow (CHW F)	22.441 m
50 mmø	Mechanical Pipe Chilled Water Flow (CHW F)	6.352 m
65 mmø	Mechanical Pipe Chilled Water Flow (CHW F)	26.500 m
80 mmø	Mechanical Pipe Chilled Water Flow (CHW F)	32.765 m
100 mmø	Mechanical Pipe Chilled Water Flow (CHW F)	3.571 m
Mechanical Pipe Chilled Water Flow (CHW F)		222.552 m

Pipe Schedule		
Size	System Type	Length
20 mmø	Mechanical Pipe Chilled Water Return (CHW R)	68.063 m
25 mmø	Mechanical Pipe Chilled Water Return (CHW R)	10.678 m
32 mmø	Mechanical Pipe Chilled Water Return (CHW R)	51.046 m
40 mmø	Mechanical Pipe Chilled Water Return (CHW R)	21.796 m
50 mmø	Mechanical Pipe Chilled Water Return (CHW R)	6.853 m
65 mmø	Mechanical Pipe Chilled Water Return (CHW R)	26.883 m
80 mmø	Mechanical Pipe Chilled Water Return (CHW R)	33.637 m
100 mmø	Mechanical Pipe Chilled Water Return (CHW R)	3.571 m
Mechanical Pipe Chilled Water Return (CHW R)		222.527 m
Grand total: 441		445.078 m

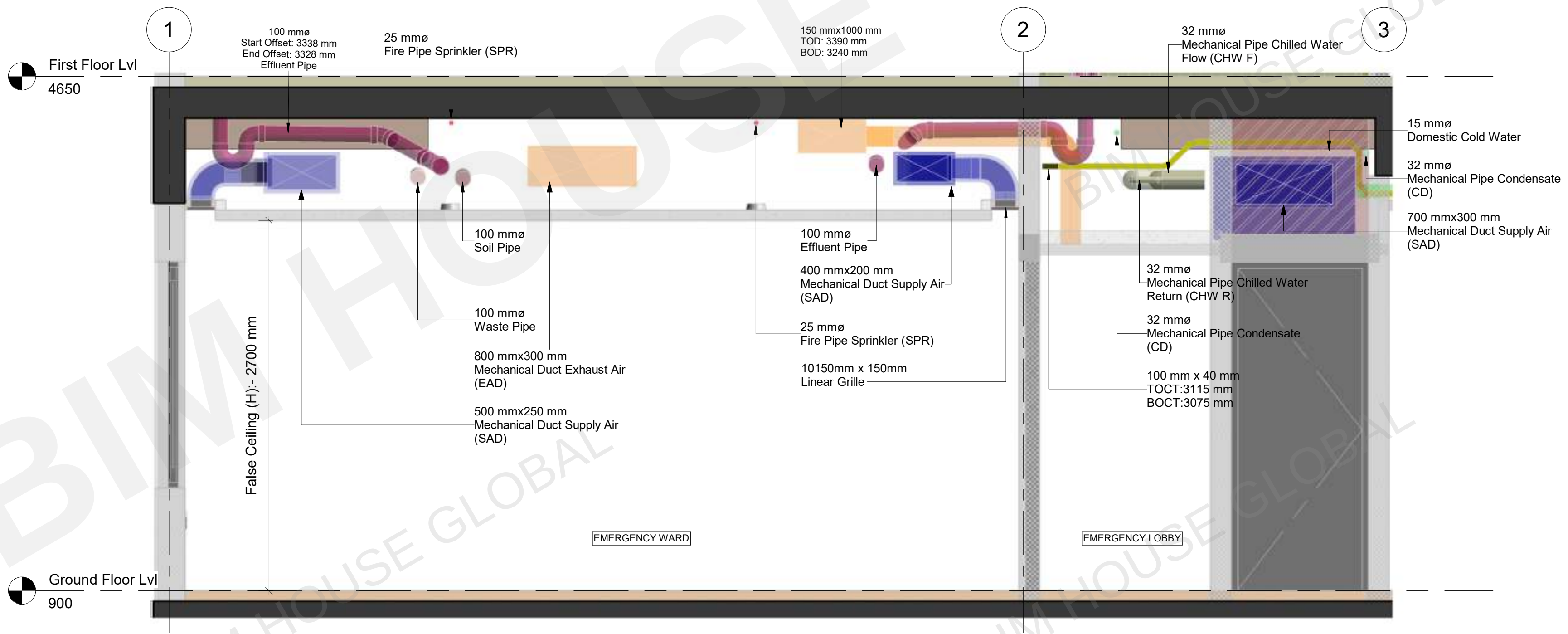
Quantities

NOTES	Dimensions are not to be scaled.	
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	This drawing should not be referred for any other purpose	
LEGEND	HVAC	
		Return Air Duct (RAD)
		Exhaust Air Duct (EAD)
		Fresh Air Duct (FAD)
		Supply Air Duct (SAD)
		Toilet Extract Duct (TED)
		Chilled Water Flow Pipe (CHW-F)
		Chilled Water Return Pipe (CHW-R)
		Condensate Pipe (CD)
	PLUMBING	
		Hot Water Return Pipe (HWR)
		Hot Water Supply Pipe (HWS)
		RO Water Pipe (RW)
		Flusing Water Pipe (FW)
		Effluent Pipe (EP)
		Soil Pipe (SP)
		Waste Pipe (WP)
		Domestic Water Pipe (DWP)
	ELECTRICAL	
		Cable Tray
	FIRE FIGHTING	
		Fire Fighting Pipe
Client		
Architects		
Structural Consultant		
MEP Consultant		
BIM Consultant		
BIM HOUSE GLOBAL Pvt. Ltd. Projects Consulting Training BC-108, Matrix Tower, Opp. Jaypee Hospital, Sector-132, Noida-201304		
Project Title		
Drawing Title Part Plan & Section- Emergency Room Area		
Date	dd/mm/yyyy	Project No.
Drawn by	Author	Drawing No.
Checked by	Checker	Sheet-1A
Approved by	Approver	



3D View of Section-2

1 Section Line Part Plan- Emergency Room
1 : 75



2 Section 2
1 : 25

NOTES

Dimensions are not to be scaled.

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This drawing should not be referred for any other purpose

LEGEND

HVAC

Return Air Duct (RAD)

Exhaust Air Duct (EAD)

Fresh Air Duct (FAD)

Supply Air Duct (SAD)

Toilet Extract Duct (TED)

Chilled Water Flow Pipe (CHW-F)

Chilled Water Return Pipe (CHW-R)

Condensate Pipe (CD)

PLUMBING

Hot Water Return Pipe (HWR)

Hot Water Supply Pipe (HWS)

RO Water Pipe (RW)

Flusing Water Pipe (FW)

Effluent Pipe (EP)

Soil Pipe (SP)

Waste Pipe (WP)

Domestic Water Pipe (DWP)

ELECTRICAL

Cable Tray

FIRE FIGHTING

Fire Fighting Pipe

Client

Architects

Structural Consultant

MEP Consultant

BIM Consultant

BIM HOUSE GLOBAL Pvt. Ltd.

Projects | Consulting | Training

BC-108, Matrix Tower, Opp. Jaypee Hospital, Sector-132, Noida-201304

Project Title

Drawing Title

Part Plan & Section- Emergency Room Area

Date

dd/mm/yyyy

Project No.

Drawn by

Author

Drawing No.

Checked by

Checker

Sheet-1B

Approved by

Approver

N	TREATED FRESH AIR UNIT									
	Double skin type Treated Fresh Air Units (BMS compatible) as per specifications given below:-									
	TFA Construction:- It shall be made out of min. 0.8 mm pre-plasticized/pre-coated Galvanised steel sheet outside & 0.8 mm plain GSS sheet inside with 43 mm thick PUF insulation factory injected between them by injection moulding m/c, with density not less than 38 kg/Cum between them. Drain pan (made out of 1.25 mm stainless steel (SS Grade 304) sheet insulated with 19 mm think closed cell insulation(Nitrile/XLPE) & thermal break profile. Necessary foundation required & anti vibration pads shall be provided & cost for the same shall be included in this item.									
	Floor Space & Type (Floor Mounted /Ceiling Suspended)	Tonnage (TR)	CFM	Static Pressure (in mm)	Tag No.	HP	Stage of ...			
1	2400 Wide Corridor	40	6000	40	TFA-8	5	1	Nos.	1	
O	<u>AIR HANDLING UNIT FOR OT / CSSD AREAS - With VFD-(Recirculation)</u>									
	Fabricated double skin type Air Handling Units (BMS compatible) for Operation Theatres as per specifications given below:-									
	AHU Construction:- It shall be made out of min.0.8 mm pre-plasticized/pre-coated Galvanised steel sheet outside & 0.8 mm plain stainless steel sheet inside with 43 mm thick PUF insulation factory injected between them by injection moulding m/c, with density not less than 38 kg/Cum between them. Drain pan (made out of 1.25 mm stainless steel (SS Grade 304) sheet insulated with 19 mm think closed cell insulation(Nitrile/XLPE) &									
	Supply Air Stream:- 1) Filter section consisting of pre filter and microvee/fine filter . Pre-filter section shall be with non woven synthetic media of 10 micron particle size with an efficiency of 90%, fine/microvee filter section will be with filters of non woven synthetic media of 3 micron particle size of efficiency 99%. HEPA filter section with non									
	Floor Space & Type (Floor Mounted /Ceiling Suspended)	Tonnage (TR)	CFM	Static Pressure (in mm)	Tag. No.	HP	Stage			
1	C SECTION	10	4000	125	AHU-41	5.5	3	Nos.	1	
			40			1.5				
	DX Coil	2 nos. x 5.5 TR								
P	<u>FAN COILS UNITS (CEILING SUSPENDE TYPE)</u>									
	GI powder coated horizontal ceiling suspended fan coil units complete with fan, 3 speed motor, 3 row deep cooling coil, 5 mm external static, aluminium filters with filter box, double sandwitched insulated tray, ball valve with strainer, copper connection, rotary switch, supporting arrangement, electrical wiring etc.The thickness of GSS sheet should be 1.25 mm & thickness of filter 15 mm. The fan shall be selected for 5 mm external static pressure. The complete fan coil unit shall be in line with the standard specification. The capacity of fan coil units shall be as follows.									
1	1000 CFM (2.5 TR)							Nos.	1	
2	600 CFM (1.5 TR)							Nos.	14	
3	400 CFM (1.0 TR)							Nos.	20	
Q	<u>SPLIT UNITS (Outdoor Unit)</u>									
1	5.5 TR							Nos.	2	
	TOTAL CARRIED TO SUMMARY									

QUANTITIES OF HVAC WORKS (LOW SIDE)					
SI.No.	Description	Unit	Qty.	Area (sqm)	
A	CHILLED WATER PIPING				
	Chilled water pipe of following size of MS Class C with insulation 50 mm thick. Note : The Pipes of sizes 150mm & below shall be M.S. 'C' class as per IS : 1239 and pipes size above 150mm shall be welded black steel pipe heavy class as per IS: 3589, from minimum 6 mm thick M.S. Sheet for pipes upto 350 mm dia. and from minimum 8 mm thick MS sheet for pipes of 400 mm dia and above.				
1	100 mm dia MS Pipes	RM	68.396		
2	65 mm dia MS Pipes	RM	48.231		
3	50 mm dia MS Pipes	RM	54.904		
4	40 mm dia MS Pipes	RM	27.019		
5	32 mm dia MS Pipes	RM	122.528		
6	25 mm dia MS Pipes	RM	69.943		
7	20 mm dia MS Pipes	RM	161.788		
B	HYDRONIC SUPPLY / RETURN PIPE				
	32 mm dia MS Pipes	RM	79.717		
C	REFRIGEATION FLOW PIPE				
	32 mm dia CU Pipes	RM	3.094		
D	CONDENSATE PIPE				
	32 mm dia MS Pipes	RM	134.636		
E	CHILLED WATER PIPING FITTING				
	Elbow Fitting of following size of MS Class C with insulation 50 mm thick.				
1	80 mm Dia	Nos.	15		
2	65 mm Dia	Nos.	4		
3	50 mm Dia	Nos.	29		
4	40 mm Dia	Nos.	12		
5	32 mm Dia	Nos.	42		
6	25 mm Dia	Nos.	48		
7	20 mm Dia	Nos.	130		
	Tee joint of following size of MS Class C with insulation 50 mm thick.				
8	80 mm Dia	Nos.	19		
9	65 mm Dia	Nos.	8		
10	50 mm Dia	Nos.	12		
11	40 mm Dia	Nos.	4		
12	32 mm Dia	Nos.	24		
13	25 mm Dia	Nos.	8		
	Reducer of following size of MS Class C with insulation 50 mm thick.				
14	80 mm to 32 mm Dia	Nos.	4		
15	80 mm to 25 mm Dia	Nos.	2		
16	65 mm to 50 mm Dia	Nos.	2		
17	50 mm to 32 mm Dia	Nos.	4		
18	32 mm to 25 mm Dia	Nos.	2		
19	32 mm to 20 mm Dia	Nos.	6		
20	25 mm to 20 mm Dia	Nos.	4		
F	HYDRONIC SUPPLY / RETURN PIPE FITTING				
	Elbow Fitting of following size of MS Class C				
	32 mm Dia	Nos.	22		
G	CONDENSATE PIPE FITTING				
	Elbow Fitting of following size of MS Class C				
	32 mm Dia	Nos.	95		
	Tee joint of following size of MS Class C				
	32 mm Dia	Nos.	2		
H	REFRIGERATION PIPE FITTING				
	Elbow Fitting of following size				
	32 mm Dia	Nos.	4		
	Tee joint of following size				
	32 mm Dia	Nos.	1		

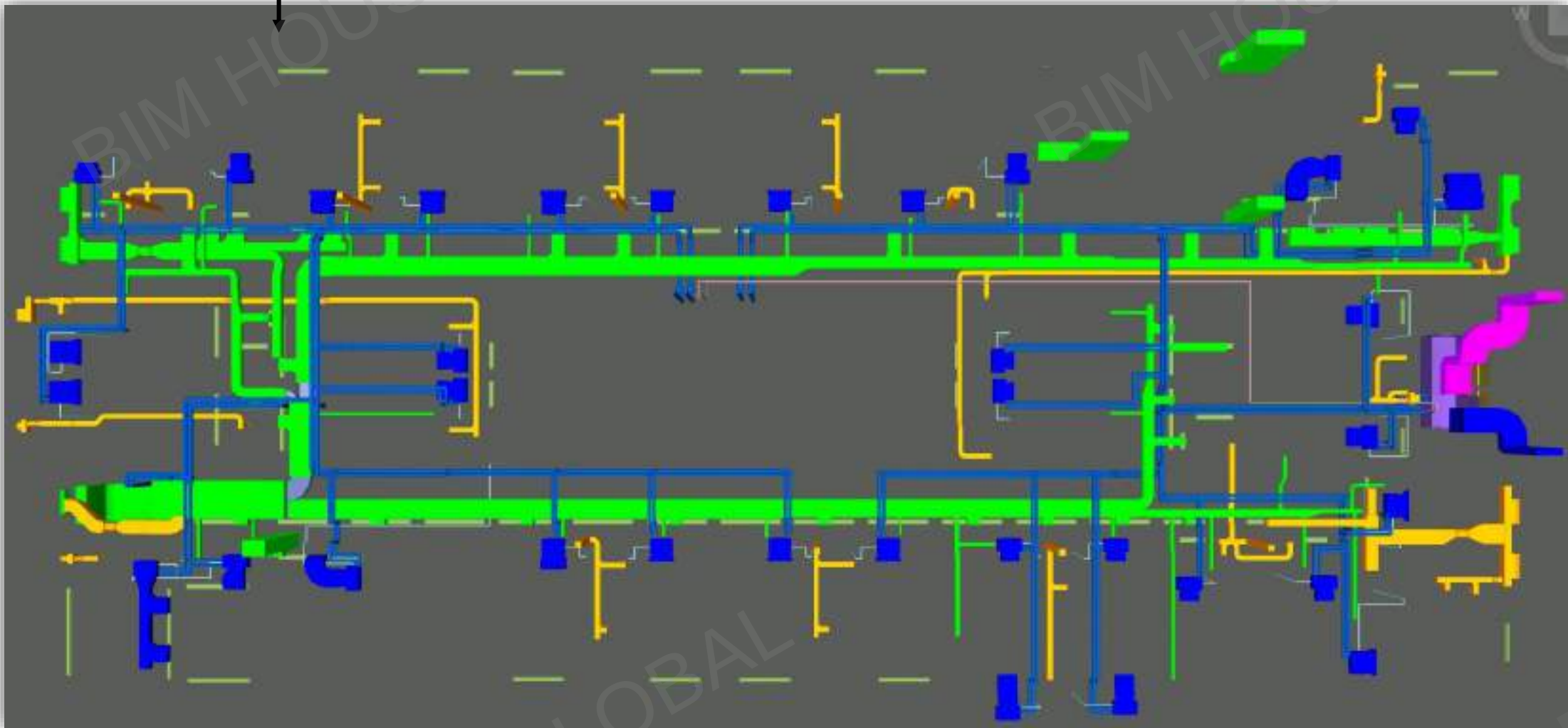
QUANTITIES TAKEOFF

Quantities of HVAC

Quantities of HVAC Ventilation

Model View

2D CAD View

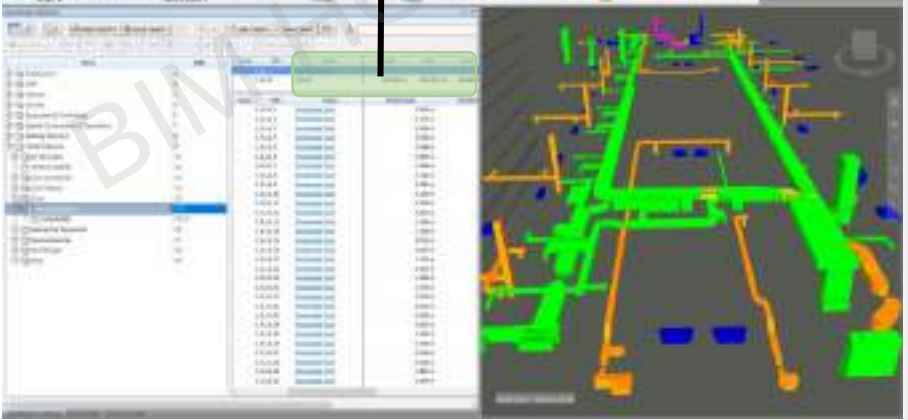


Quantities of HVAC Duct

Sl.No.	Description	Unit	Qty.	Area (sqm)
I AIR DISTRIBUTION (FOR AIR CONDITIONING AREAS)				
GSS sheet metal rectangular/round ducting.				
Duct Size -> Width X Height (mm)				
1	100 mmx100 mm	RM	49.042	19.617 m²
2	150 mmx100 mm	RM	1.573	0.787 m²
3	150 mmx150 mm	RM	11.73	7.038 m²
4	150 mmx500 mm	RM	0.135	0.176 m²
5	200 mmx100 mm	RM	27.604	16.562 m²
6	200 mmx150 mm	RM	77.176	54.023 m²
7	200 mmx200 mm	RM	12.874	10.299 m²
8	200 mmx300 mm	RM	1.8	1.800 m²
9	250 mmx150 mm	RM	0.491	0.393 m²
10	250 mmx200 mm	RM	8.42	7.578 m²
11	250 mmx250 mm	RM	24.5	24.500 m²
12	250 mmx300 mm	RM	1.001	1.102 m²
13	300 mmx150 mm	RM	5.762	5.186 m²
14	300 mmx200 mm	RM	7.502	7.502 m²
15	300 mmx250 mm	RM	4.038	4.441 m²
16	300 mmx300 mm	RM	4.02	4.824 m²
17	300 mmx350 mm	RM	5.222	6.789 m²
18	350 mmx150 mm	RM	0.641	0.641 m²
19	350 mmx200 mm	RM	14.853	16.338 m²
20	350 mmx250 mm	RM	6.176	7.411 m²
21	350 mmx350 mm	RM	0.156	0.218 m²
22	400 mmx200 mm	RM	3.83	4.596 m²
23	400 mmx400 mm	RM	3.2	1.920 m²
24	400 mmx450 mm	RM	3.2	2.040 m²
25	400 mmx900 mm	RM	0.061	0.159 m²
26	450 mmx250 mm	RM	12.116	16.963 m²
27	500 mmx150 mm	RM	11.959	15.547 m²
28	500 mmx200 mm	RM	0.335	0.469 m²
29	500 mmx300 mm	RM	7.364	11.783 m²
30	500 mmx350 mm	RM	3.348	5.691 m²
31	550 mmx350 mm	RM	1.829	3.291 m²
32	600 mmx150 mm	RM	0.775	1.163 m²
33	600 mmx200 mm	RM	0.237	0.368 m²
34	600 mmx300 mm	RM	2.62	4.716 m²
35	700 mmx150 mm	RM	5.853	9.950 m²
36	700 mmx250 mm	RM	20.275	38.522 m²
37	700 mmx400 mm	RM	0.007	0.015 m²
38	750 mmx250 mm	RM	18.512	37.024 m²
39	750 mmx300 mm	RM	19.022	39.946 m²
40	800 mmx150 mm	RM	1.524	2.895 m²
41	800 mmx250 mm	RM	5.453	11.450 m²
42	800 mmx350 mm	RM	0.031	0.072 m²
43	865 mmx615 mm	RM	3.08	9.117 m²
44	1000 mmx150 mm	RM	2.091	4.809 m²
45	1000 mmx250 mm	RM	0.826	2.314 m²
46	1000 mmx300 mm	RM	8.713	22.653 m²
47	1000 mmx350 mm	RM	0.118	0.317 m²
48	1000 mmx400 mm	RM	1.58	4.424 m²
49	1050 mmx500 mm	RM	3.4	10.540 m²
50	1100 mmx250 mm	RM	1.942	5.243 m²
51	1200 mmx150 mm	RM	0.009	0.025 m²
52	1200 mmx200 mm	RM	0.098	0.276 m²
53	1300 mmx200 mm	RM	0.281	0.843 m²
54	1450 mmx350 mm	RM	3.4	12.240 m²
55	1500 mmx300 mm	RM	5.166	18.597 m²
56	1500 mmx400 mm	RM	1.48	5.624 m²
57	1850 mmx350 mm	RM	3.6	17.280 m²
58	1850 mmx650 mm	RM	0.502	2.508 m²



Name	Length	Area	Count
Rectangular Duct	420.805 m	524.062 m²	448.000



QUANTITIES OF HVAC OF HVAC WORKS (VENTILATION)			
S.No.	Description	Unit	Qty
1	AXIAL FLOW FANS		
AXIAL FANS for exhaust air suitable for installing in any position in Horizontal or vertical. The motor shall be of class F/H (H class wherever specified in the item, to withstand a temperature of 250 degree celcius for 2 hours) suitable for 415 V ± 10% volts three phase 50cycle, AC supply & meeting criterion as per ASHRAE standard 90.1-2010 and high efficiency (IS 12615). The fan shall be equipped with mounting bracket inlet & outlet cone required at discharge. all normal application fans shall be provided with sound attenuators at inlet & outlet The fan shall be low RPM (less than 1450 RPM) and capacities shall be as follows :			
1.1	Duty : Corridor (In Case of Fire) Air Quantity : 3500 CFM (350 Dia) Static Pressure : 30 mm wg Fan Motor H.P: 3 H.P, class H motor or as per actual selection meeting other technical parameters	Nos.	4
2	INLINE FANS		
INLINE FANS suitable for installing in any position in vertical or horizontal ducts. The casing shall be double skin, internally acoustically lined and constructed of galvanised steel. The fan shall be DIDW with forward curve impeller fitted with maintenance free external rotor motor. The motor shall be suitable for 220±5% /415±10% volt single phase three phase 50 cycles AC supply & meeting criterion as per ASHRAE standard 90.1-2010 and high efficiency (IS 12615). Quoted price shall be inclusive of electronic speed regulator and wiring between fan & speed regulator for single phase fans. In case of 3 phase fans quoted price shall be inclusive of DOL starter panel (As per motor HP meeting our parametres) with cabling between starter panel and fan. The incoming power supply to speed regulator / starter panel shall be provided by electrical contractor. Fan along with cabinet should be AMCA certified. Noise level should not exceed 65 DB at 3 meter in room condition, PCC/RCC foundation with plaster, other mounting arrangement, Antivibration arrangement of cushy foot mountings etc.			
2.1	Duty - Toilet (For Toilet Exhaust Air) Air Quantity : 200 CFM Static Pressure : 20 mm wg Fan Motor H.P: 0.25 H.P or as per actual selection meeting other technical parameters	No.	3
2.2	Duty - Toilet (For Toilet Exhaust Air) Air Quantity : 300 CFM Static Pressure : 20 mm wg Fan Motor H.P: 0.15 H.P or as per actual selection meeting other technical parameters	No.	2
2.3	Duty - Toilet (For Toilet Exhaust Air) Air Quantity : 300 CFM Static Pressure : 20 mm wg Fan Motor H.P: 0.15 H.P or as per actual selection meeting other technical parameters	No.	2
3	PROPELLER FANS		
Direct driven PROPELLER FANS for exhaust air as shown in drawings. Each fan shall be complete with permanent split capacitor or shaded pole motor, mounting plate with light weight type PVC /aluminium impellers with aerofoil contours for high efficiency & low noise and with wooden frames & gravity louvers for weather protection as required. Fan selection arrangement and Electrical characteristics shall be as follows :			
3.1	200 mm dia 900 RPM fan suitable for 220 ± 5% volts 50 cycles, 1 phase AC supply.	Nos.	1
TOTAL CARRIED TO SUMMARY			



4 Nos Axial Flow Fan

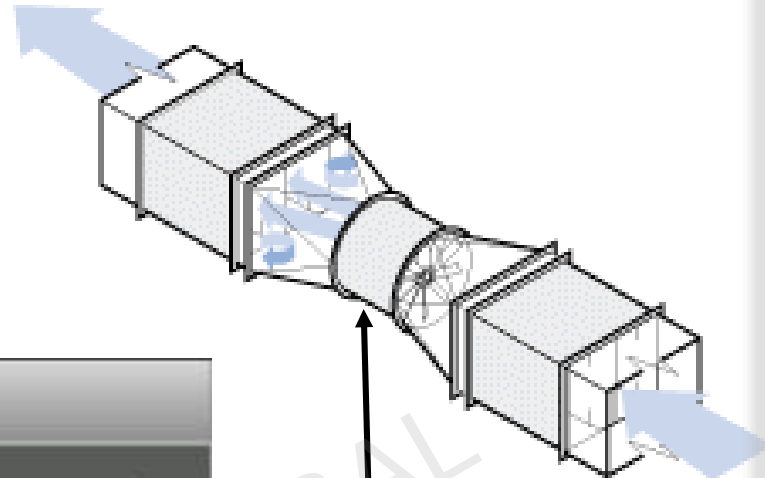
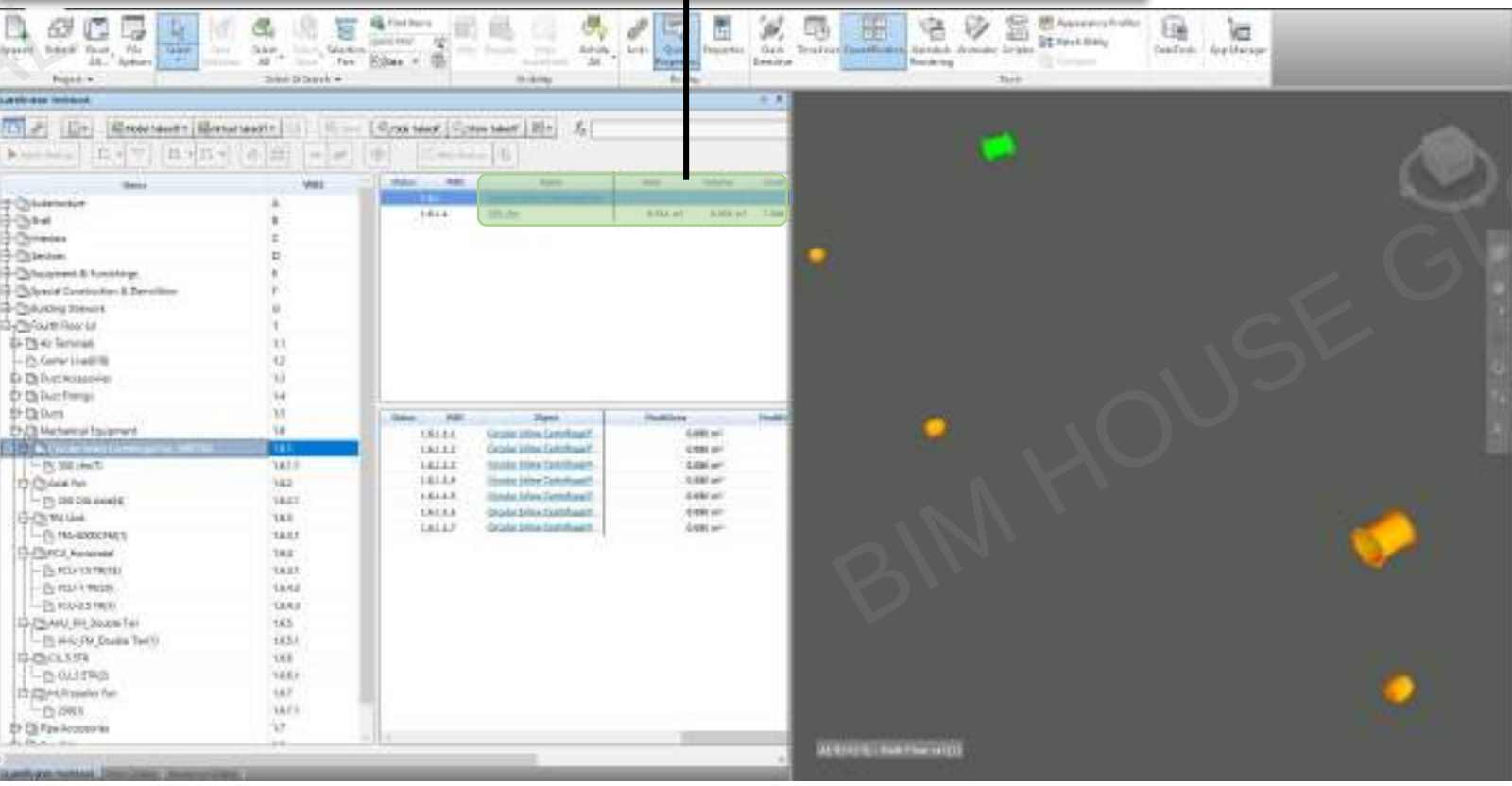


7 Nos Inline Fan



1 Nos Propeller Fan

Name	Area	Volume	Count
Circular Inline Centrifugal Fan...			
300 cfm	0.561 m²	0.036 m³	7.000



Axial Flow Fan

Quantities of HVAC Equipment

Sl.No.	Description							Unit	Qty.	Area (sqm)
N	TREATED FRESH AIR UNIT									
	Double skin type Treated Fresh Air Units (BMS compatible) as per specifications given below:-									
	TFA Construction:- It shall be made out of min. 0.8 mm pre-plasticized/pre-coated Galvanised steel sheet outside & 0.8 mm plain GSS sheet inside with 43 mm thick PUF insulation factory injected between them by injection moulding m/c, with density not less than 38 kg/Cum between them. Drain pan (made out of 1.25 mm stainless steel (SS Grade 304) sheet insulated with 19 mm thick closed cell insulation(Nitrile/XLPE) & thermal break profile. Necessary foundation required & anti vibration pads shall be provided & cost for the same shall be included in this item.									
	Floor Space & Type (Floor Mounted /Ceiling Suspended)	Tonnage (TR)	CFM	Static Pressure (in mm)	Tag No.	HP	St age of			
1	2400 Wide Corridor	40	6000	40	TFA-8	5	1	Nos.	1	
O	AIR HANDLING UNIT FOR OT / CSSD AREAS - With VFD-(Recirculation)									
	Fabricated double skin type Air Handling Units (BMS compatible) for Operation Theatres as per specifications given below:-									
	AHU Construction:- It shall be made out of min.0.8 mm pre-plasticized/pre-coated Galvanised steel sheet outside & 0.8 mm plain stainless steel sheet inside with 43 mm thick PUF insulation factory injected between them by injection moulding m/c, with density not less than 38 kg/Cum between them. Drain pan (made out of 1.25 mm stainless steel (SS Grade 304) sheet insulated with 19 mm thick closed cell insulation(Nitrile/XLPE) &									
	Supply Air Stream:-									
	1) Filter section consisting of pre filter and microvee/fine filter . Pre-filter section shall be with non woven synthetic media of 10 micron particle size with an efficiency of 90%, fine/microvee filter section will be with filters of non woven synthetic media of 3 micron particle size of efficiency 99%. HEPA filter section with non									
	Floor Space & Type (Floor Mounted /Ceiling Suspended)	Tonnage (TR)	CFM	Static Pressure (in mm)	Tag No.	HP	St age			
1	C SECTION	10	4000	125	AHU-41	5.5	3	Nos.	1	
	DX Coil	2 nos.x 5.5 TR		40		1.5				
P	FAN COILS UNITS (CEILING SUSPENDED TYPE)									
	GI powder coated horizontal ceiling suspended fan coil units complete with fan, 3 speed motor, 3 row deep cooling coil, 5 mm external static, aluminium filters with filter box, double sandwiched insulated tray, ball valve with strainer, copper connection, rotary switch, supporting arrangement, electrical wiring etc.The thickness of GSS sheet should be 1.25 mm & thickness of filter 15 mm. The fan shall be selected for 5 mm external static pressure. The complete fan coil unit shall be in line with the standard specification. The capacity of fan coil units shall be as follows.									
1	1000 CFM (2.5 TR)							Nos.	1	
2	600 CFM (1.5 TR)							Nos.	14	
3	400 CFM (1.0 TR)							Nos.	20	
Q	SPLIT UNITS (Outdoor Unit)									
1	5.5 TR							Nos.	2	
TOTAL CARRIED TO SUMMARY										

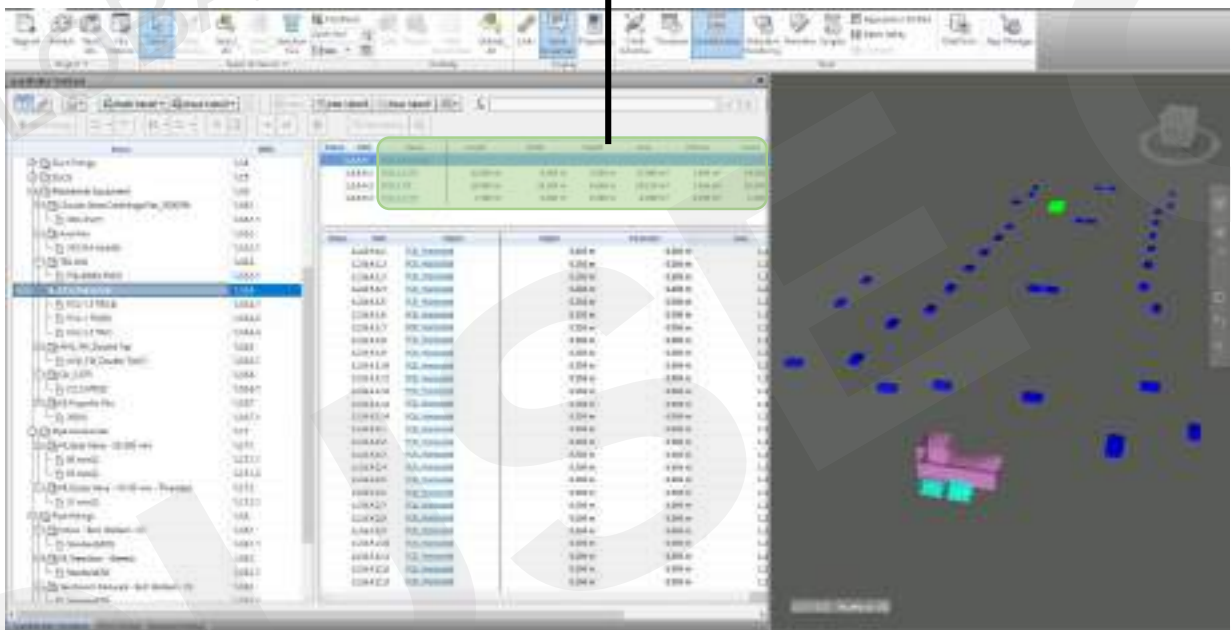


1 Nos 4000 CFM F.M AHU



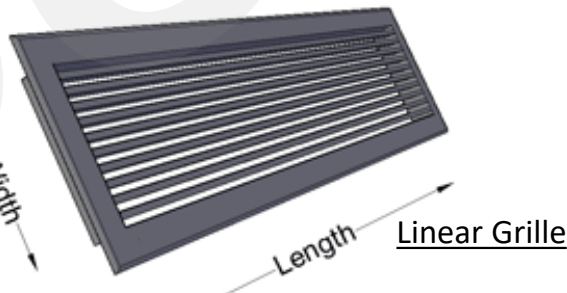
35 Nos FCU (Fan Coil Unit)

Name	Length	Width	Height	Area	Volume	Count
FCU_Horizontal						
FCU-1.5 TR	12.600 m	8.400 m	3.500 m	17.080 m²	1.966 m³	14.000
FCU-1 TR	19.400 m	10.200 m	6.000 m	24.214 m²	3.064 m³	20.000
FCU-2.5 TR	1.450 m	0.683 m	0.300 m	2.288 m²	0.309 m³	1.000



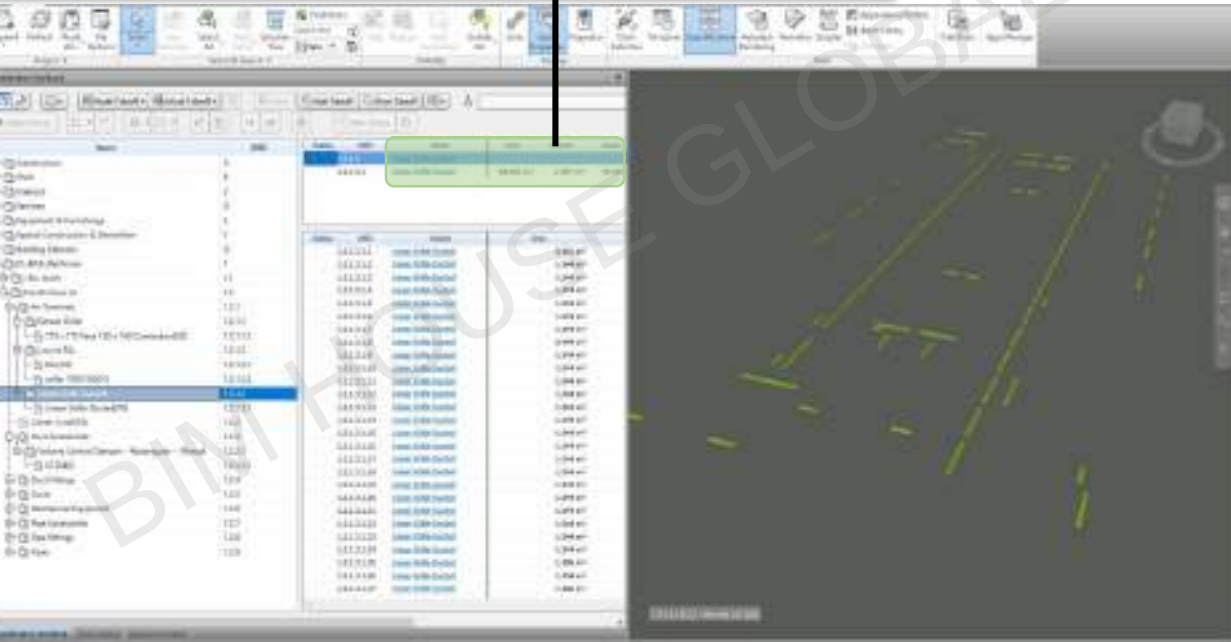
Quantities of HVAC Accessories

Sl.No.	Description	Unit	Qty.	Area (sqm)
J	AIR DIFFUSERS			
	Exhaust Air Diffuser			
1	150 mm X 150 mm	Nos.	32	
K	LINEAR AIR GRILLES			
	Width x Length			
1	150 mmx600 mm	Nos.	2	
2	150 mmx1000 mm	Nos.	12	
3	150 mmx1200 mm	Nos.	2	
4	150 mmx1480 mm	Nos.	2	
5	150 mmx1500 mm	Nos.	2	
6	150 mmx1640 mm	Nos.	1	
7	150 mmx2000 mm	Nos.	13	
8	150 mmx2400 mm	Nos.	34	
9	150 mmx2500 mm	Nos.	3	
10	150 mmx3350 mm	Nos.	1	
11	150 mmx3500 mm	Nos.	1	
12	150 mmx3530 mm	Nos.	1	
13	150 mmx3595 mm	Nos.	1	
14	150 mmx3600 mm	Nos.	1	
L	DAMPERS			
1	100 mmx100 mm-100 mmx100 mm	Nos.	28	
2	150 mmx100 mm-150 mmx100 mm	Nos.	1	
3	150 mmx150 mm-150 mmx150 mm	Nos.	1	
4	300 mmx200 mm-300 mmx200 mm	Nos.	1	
5	350 mmx200 mm-350 mmx200 mm	Nos.	1	
6	350 mmx250 mm-350 mmx250 mm	Nos.	2	
7	400 mmx200 mm-400 mmx200 mm	Nos.	1	
8	750 mmx300 mm-750 mmx300 mm	Nos.	1	
9	1000 mmx300 mm-1000 mmx300 mm	Nos.	2	
10	1100 mmx250 mm-1100 mmx250 mm	Nos.	1	
11	1500 mmx300 mm-1500 mmx300 mm	Nos.	1	



Damper

Name	Area	Volume	Count
Linear Grille-Ducted			
Linear Grille-Ducted	68.052 m²	1.967 m³	76.000



Quantities of HVAC Pipe

QUANTITIES OF HVAC WORKS (LOW SIDE)				
Sl.No.	Description	Unit	Qty.	Area (sqm)
A	CHILLED WATER PIPING			
	Chilled water pipe of following size of MS Class C with insulation 50 mm thick. Note : The Pipes of sizes 150mm & below shall be M.S. 'C' class as per IS : 1239 and pipes size above 150mm shall be welded black steel pipe heavy class as per IS: 3589, from minimum 6 mm thick M.S. Sheet for pipes upto 350 mm dia. and from minimum 8 mm thick MS sheet for pipes of 400 mm dia and above.			
1	100 mm dia MS Pipes	RM	68.396	
2	65 mm dia MS Pipes	RM	48.231	
3	50 mm dia MS Pipes	RM	54.904	
4	40 mm dia MS Pipes	RM	27.019	
5	32 mm dia MS Pipes	RM	122.528	
6	25 mm dia MS Pipes	RM	69.943	
7	20 mm dia MS Pipes	RM	161.768	
B	HYDRONIC SUPPLY / RETURN PIPE			
	32 mm dia MS Pipes	RM	79.717	
C	REFRIGERATION FLOW PIPE			
	32 mm dia CU Pipes	RM	3.094	
D	CONDENSATE PIPE			
	32 mm dia MS Pipes	RM	134.636	
E	CHILLED WATER PIPING FITTING			
	Elbow Fitting of following size of MS Class C with insulation 50 mm thick.			
1	80 mm Dia	Nos.	15	
2	65 mm Dia	Nos.	4	
3	50 mm Dia	Nos.	29	
4	40 mm Dia	Nos.	12	
5	32 mm Dia	Nos.	42	
6	25 mm Dia	Nos.	48	
7	20 mm Dia	Nos.	130	
	Tee joint of following size of MS Class C with insulation 50 mm thick.			
8	80 mm Dia	Nos.	19	
9	65 mm Dia	Nos.	8	
10	50 mm Dia	Nos.	12	
11	40 mm Dia	Nos.	4	
12	32 mm Dia	Nos.	24	
13	25 mm Dia	Nos.	8	
	Reducer of following size of MS Class C with insulation 50 mm thick.			
14	80 mm to 32 mm Dia	Nos.	4	
15	80 mm to 25 mm Dia	Nos.	2	
16	65 mm to 50 mm Dia	Nos.	2	
17	50 mm to 32 mm Dia	Nos.	4	
18	32 mm to 25 mm Dia	Nos.	2	
19	32 mm to 20 mm Dia	Nos.	6	
20	25 mm to 20 mm Dia	Nos.	4	
F	HYDRONIC SUPPLY / RETURN PIPE FITTING			
	Elbow Fitting of following size of MS Class C			
	32 mm Dia	Nos.	22	
G	CONDENSATE PIPE FITTING			
	Elbow Fitting of following size of MS Class C			
	32 mm Dia	Nos.	95	
	Tee joint of following size of MS Class C			
	32 mm Dia	Nos.	2	
H	REFRIGERATION PIPE FITTING			
	Elbow Fitting of following size			
	32 mm Dia	Nos.	4	
	Tee joint of following size			
	32 mm Dia	Nos.	1	



Elbow

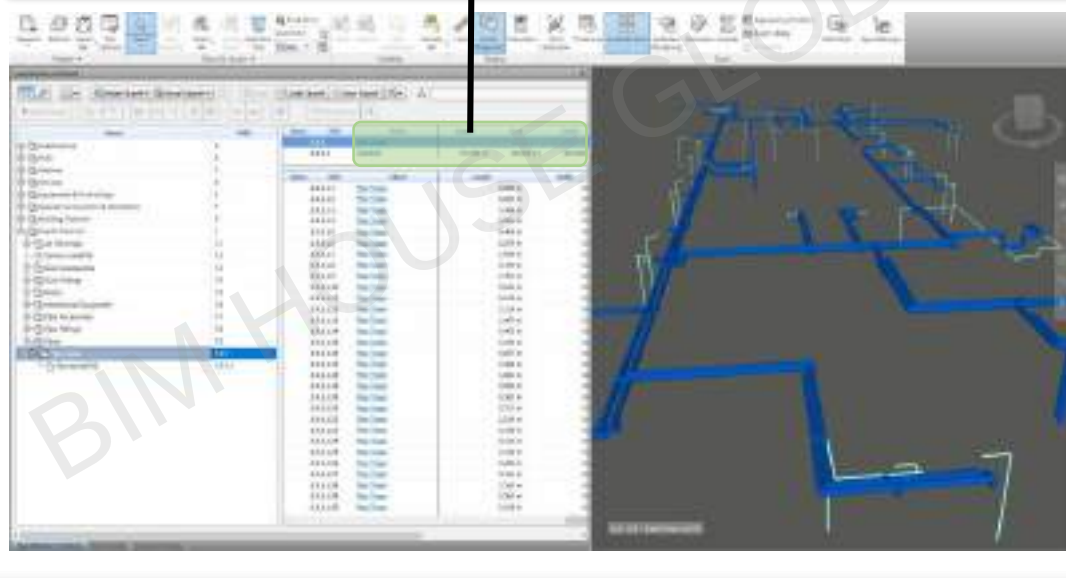


Reducer



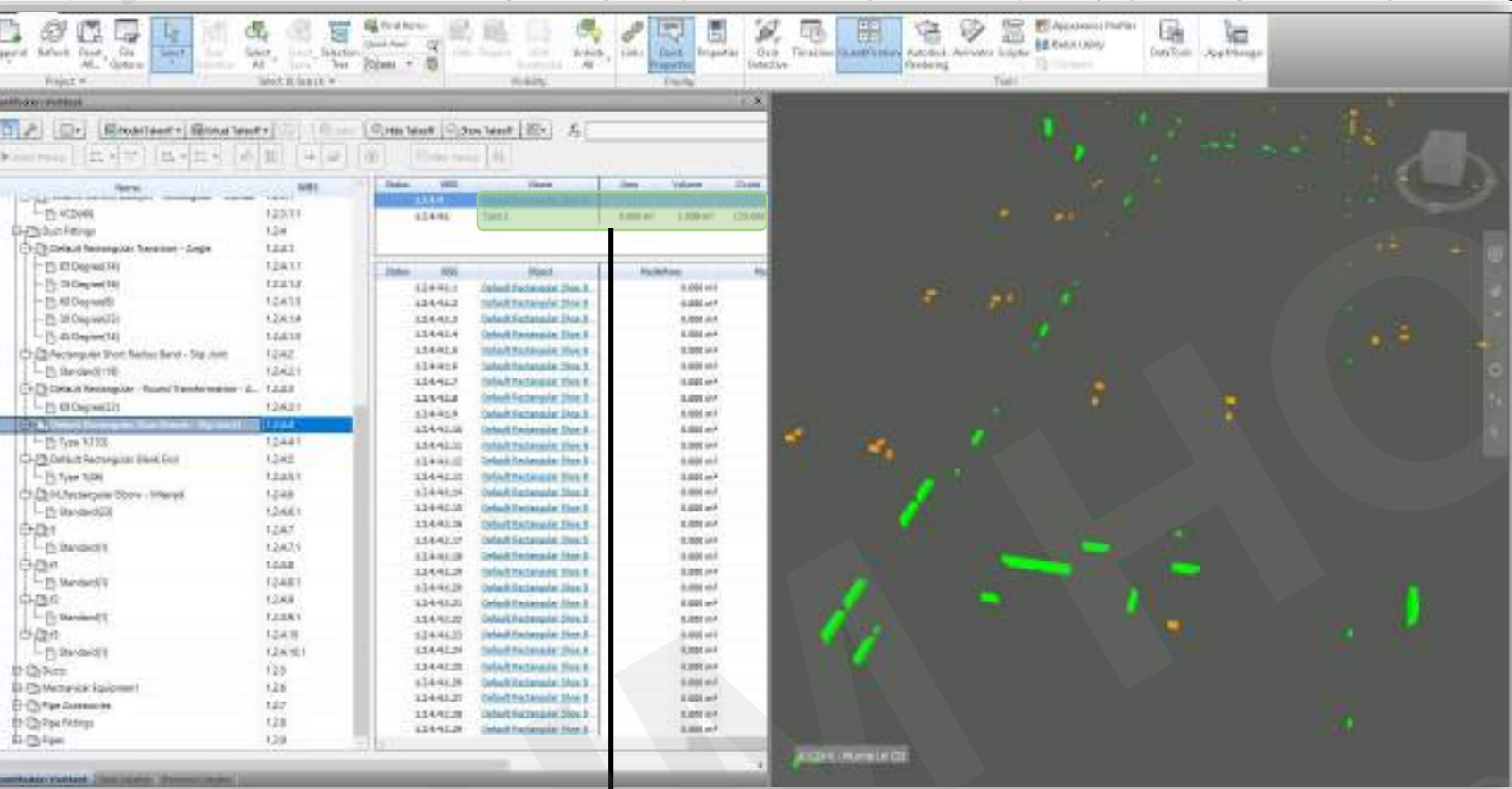
Tee

Name	Length	Area	Count
Pipe Types			
Standard	771.006 m	89.004 m²	618.000

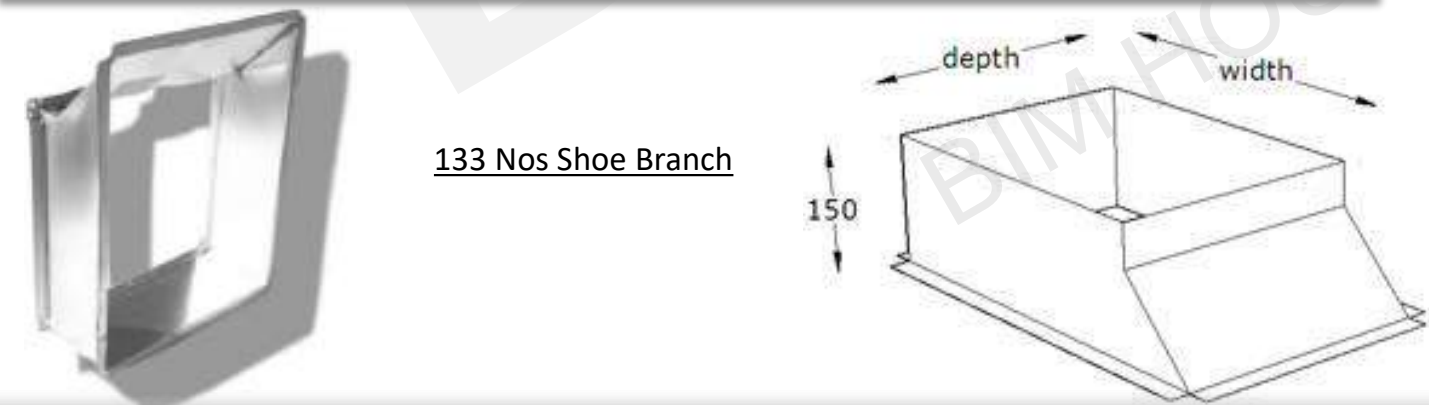


Quantities of HVAC Duct Fitting

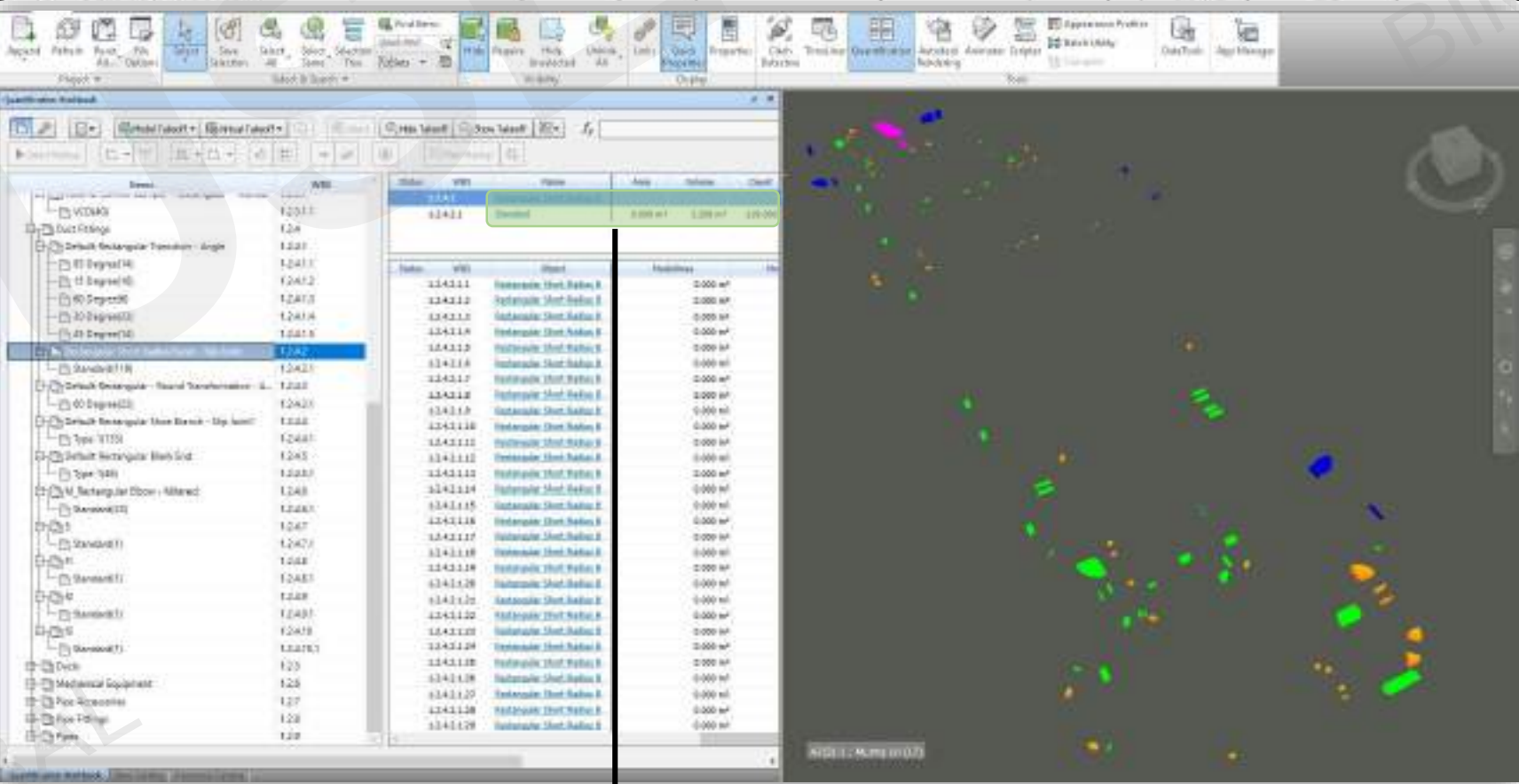
Sl.No.	Description	Unit	Qty.	Area (sqm)
I-1	END CAP			
	Width X Height			
1	200 mmx100 mm	Nos.	11	0.220
2	200 mmx150 mm	Nos.	26	0.780
3	200 mmx200 mm	Nos.	3	0.120
4	250 mmx200 mm	Nos.	1	0.050
5	300 mmx300 mm	Nos.	2	0.180
6	350 mmx200 mm	Nos.	1	0.070
7	350 mmx250 mm	Nos.	2	0.175
	Total			1.595
I-2	SHOE BRANCH			
	Width X Height			
1	100 mmx100 mm-100 mmx100 mm	Nos.	29	
2	150 mmx100 mm-150 mmx100 mm	Nos.	1	
3	150 mmx150 mm-150 mmx150 mm	Nos.	33	
4	150 mmx200 mm-150 mmx200 mm	Nos.	7	
5	200 mmx100 mm-200 mmx100 mm	Nos.	8	
6	200 mmx150 mm-200 mmx150 mm	Nos.	16	
7	200 mmx200 mm-200 mmx200 mm	Nos.	3	
8	300 mmx150 mm-300 mmx150 mm	Nos.	4	
9	300 mmx250 mm-300 mmx250 mm	Nos.	1	
10	350 mmx150 mm-350 mmx150 mm	Nos.	1	
11	350 mmx300 mm-350 mmx300 mm	Nos.	1	
12	350 mmx800 mm-350 mmx800 mm	Nos.	1	
13	400 mmx700 mm-400 mmx700 mm	Nos.	1	
14	500 mmx150 mm-500 mmx150 mm	Nos.	12	
15	600 mmx150 mm-600 mmx150 mm	Nos.	2	
16	700 mmx150 mm-700 mmx150 mm	Nos.	6	
17	700 mmx250 mm-700 mmx250 mm	Nos.	1	
18	800 mmx150 mm-800 mmx150 mm	Nos.	2	
19	900 mmx400 mm-900 mmx400 mm	Nos.	1	
20	1000 mmx250 mm-1000 mmx250 mm	Nos.	2	
21	1200 mmx200 mm-1200 mmx200 mm	Nos.	1	
	Total			1.098
I-3	TAPER JOINT -REDUCER			
	Width X Height			
1	150 mmx150 mm-150 mmø	Nos.	9	
2	200 mmx150 mm-150 mmø	Nos.	3	
3	200 mmx200 mm-150 mmø	Nos.	2	
4	350 mmx350 mm-350 mmø	Nos.	7	



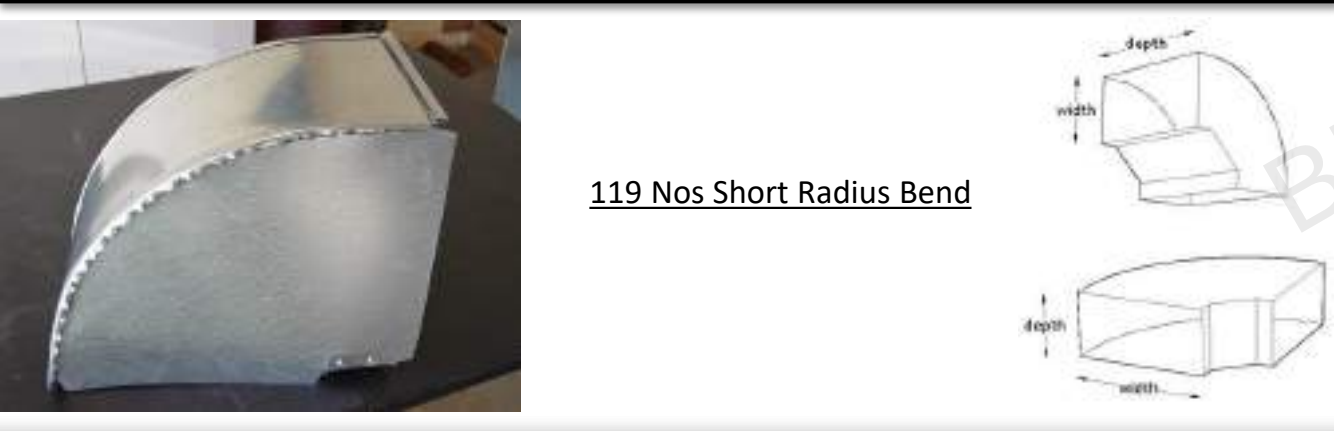
Name	Area	Volume	Count
Default Rectangular Shoe Branch - ...			
Type 1	0.000 m²	1.098 m³	133.000



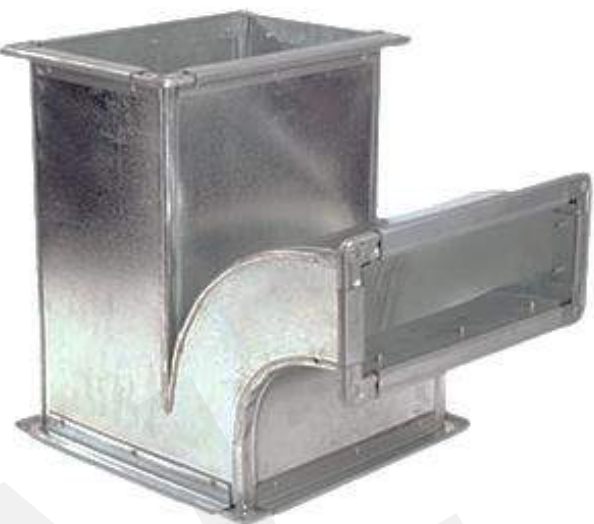
Sl.No.	Description	Unit	Qty.	Area (sqm)
I-4	RECTANGULAR ELBOW-MITERED -SLIP JOINT			
	Width X Height			
1	150 mmx150 mm-150 mmx150 mm	Nos.	1	
2	150 mmx300 mm-150 mmx300 mm	Nos.	1	
3	150 mmx500 mm-150 mmx500 mm	Nos.	8	
4	150 mmx600 mm-150 mmx600 mm	Nos.	2	
5	150 mmx700 mm-150 mmx700 mm	Nos.	4	
6	150 mmx1000 mm-150 mmx1000 mm	Nos.	4	
7	300 mmx1000 mm-300 mmx1000 mm	Nos.	2	
	Total			0.587
I-5	SHORT RADIUS BEND - SLIP JOINT			
	Width X Height			
1	100 mmx100 mm-100 mmx100 mm	Nos.	18	
2	100 mmx150 mm-100 mmx150 mm	Nos.	2	
3	100 mmx200 mm-100 mmx200 mm	Nos.	8	
30	800 mmx150 mm-800 mmx150 mm	Nos.	1	
31	800 mmx250 mm-800 mmx250 mm	Nos.	1	
32	1000 mmx300 mm-1000 mmx300 mm	Nos.	3	
	Total			3.208
I-6	Rectangular Wye Curved			
1	700 mmx250 mm-400 mmx250 mm-300 mmx250 mm	Nos.	1	
2	1500 mmx300 mm-850 mmx300 mm-650 mmx300 mm	Nos.	1	
3	1100 mmx250 mm-800 mmx250 mm-300 mmx250 mm	Nos.	1	
4	700 mmx250 mm-350 mmx250 mm-350 mmx250 mm	Nos.	1	
	Total			4.306
K-1	Louver			
	Length X Height			
1	200 mmx150 mm	Nos.	1	
2	200 mmx200 mm	Nos.	1	
3	300 mmx200 mm	Nos.	1	
4	300 mmx250 mm	Nos.	1	
5	400 mmx900 mm	Nos.	1	
6	500 mmx200 mm	Nos.	1	
7	700 mmx150 mm	Nos.	16	
8	700 mmx400 mm	Nos.	1	
9	800 mmx150 mm	Nos.	1	
10	800 mmx350 mm	Nos.	1	
11	1000 mmx150 mm	Nos.	13	
12	1000 mmx250 mm	Nos.	4	
13	1000 mmx300 mm	Nos.	2	
14	1000 mmx350 mm	Nos.	1	
15	1200 mmx150 mm	Nos.	1	
16	1200 mmx200 mm	Nos.	1	



Name	Area	Volume	Count
Rectangular Short Radius Bend - SI...			
Standard	0.000 m²	3.208 m³	119.000



Rectangular Wye



Louver



Transition / Taper Joint Reducer



Square to Round Duct



Taper Joint-Reducer

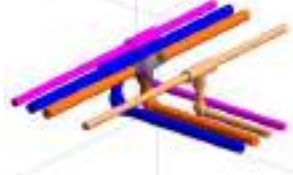


End Cap



Quantities of Plumbing

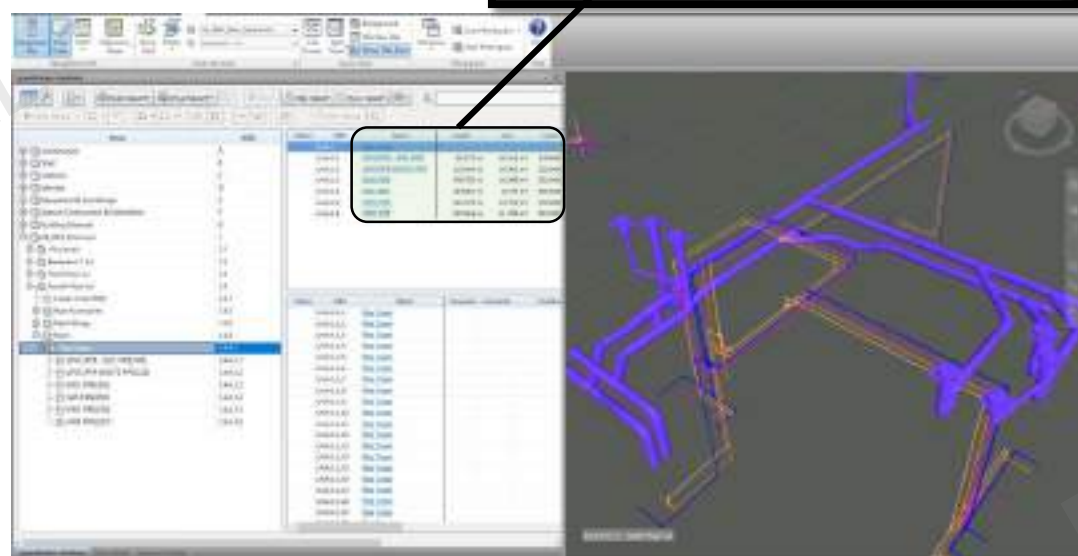
Item	Description	Qty	Unit
A. Domestic Cold Water (DWC Pipe)			
i.	15 mm Dia	52.538 mtr.	
ii.	20 mm Dia	100.934 mtr.	
iii.	25 mm Dia	70.949 mtr.	
iv.	32 mm Dia	7.523 mtr.	
B. Flushing Water Supply Pipe (FWS Pipe)			
i.	15 mm Dia	117.679 mtr.	
ii.	20 mm Dia	32.205 mtr.	
iii.	25 mm Dia	14.573 mtr.	
C. Hot Water Return (HWR Pipe)			
i.	15 mm Dia	160.942 mtr.	
ii.	20 mm Dia	37.110 mtr.	
iii.	25 mm Dia	7.521 mtr.	
D. Hot Water Supply (HWS Pipe)			
i.	15 mm Dia	74.889 mtr.	
ii.	20 mm Dia	100.341 mtr.	
iii.	25 mm Dia	41.454 mtr.	
iv.	32 mm Dia	7.476 mtr.	
E. RO Water Supply Pipe			
i.	20 mm Dia	10.484 mtr.	
F. Pipe Fitting (DWC, FWS HWR, HWS & RO Water Pipe)			
a) Elbow Bend			
i.	15 mm Dia	323 Nos	
ii.	20 mm Dia	192 Nos	
iii.	25 mm Dia	90 Nos	
iv.	32 mm Dia	4 Nos	
v.	40 mm Dia	4 Nos	
b) Reducer			
i.	20 mm to 15 mm Dia	34 Nos	
ii.	25 mm to 20 mm Dia	17 Nos	
iii.	32 mm to 25 mm Dia	1 Nos	
iv.	40 mm to 25 mm Dia	1 Nos	
c) Tee Branch			
i.	15 mm Dia	71 Nos	
ii.	20 mm Dia	97 Nos	
iii.	25 mm Dia	72 Nos	
iv.	32 mm Dia	1 Nos	
v.	40 mm Dia	1 Nos	
d) Valve			
i.	15 mm Dia	15 Nos	
ii.	20 mm Dia	19 Nos	
iii.	25 mm Dia	18 Nos	
iv.	32 mm Dia	1 Nos	
v.	40 mm Dia	1 Nos	



Item	Description	Qty	Unit
G. DRAINAGE			
WASTE AND SOIL PIPE			
a) Waste Pipe			
i.	32 mm Dia	60.859 mtr.	
ii.	50 mm Dia	30.570 mtr.	
iii.	100 mm Dia	100.786 mtr.	
b) Soil Pipe			
i.	100 mm Dia	63.994 mtr.	
H. Pipe Fitting (Waste & Soil Pipe)			
a) Wye (45° deg) Y-Joint			
i.	100 mm Dia	99 Nos	
ii.	50 mm Dia	2 Nos	
b) Bend			
i.	100 mm Dia	107 Nos	
ii.	50 mm Dia	21 Nos	
iii.	32 mm Dia	97 Nos	
c) Cap End			
i.	100 mm Dia	31 Nos	
ii.	50 mm Dia	1 Nos	
d) Reducer			
i.	100 mm to 50 mm Dia	21 Nos	
e) Floor Trap			
i.	100 mm Dia	49 Nos	
ii.	50 mm Dia	2 Nos	
f) Floor Drain			
i.	100 mm Dia	76 Nos	
TOTAL CARRIED TO SUMMARY			

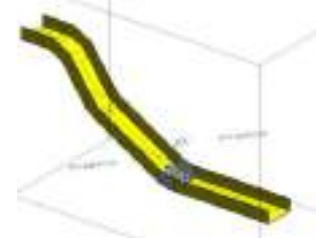
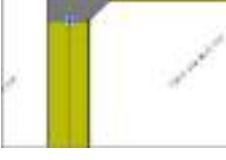
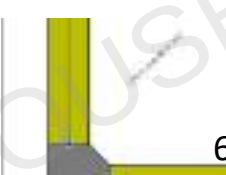


Name	Length	Area	Count
Pipe Types			
UPVC/PPR - SOIL PIPE	83.273 m	26.161 m²	149,000
UPVC/PPR-WASTE PIPE	132.604 m	36.952 m²	220,000
DWC PIPE	246.753 m	16.589 m²	362,000
FWS PIPE	164.857 m	8.737 m²	250,000
HWS PIPE	221.676 m	13.751 m²	330,000
HWR PIPE	227.566 m	11.799 m²	257,000

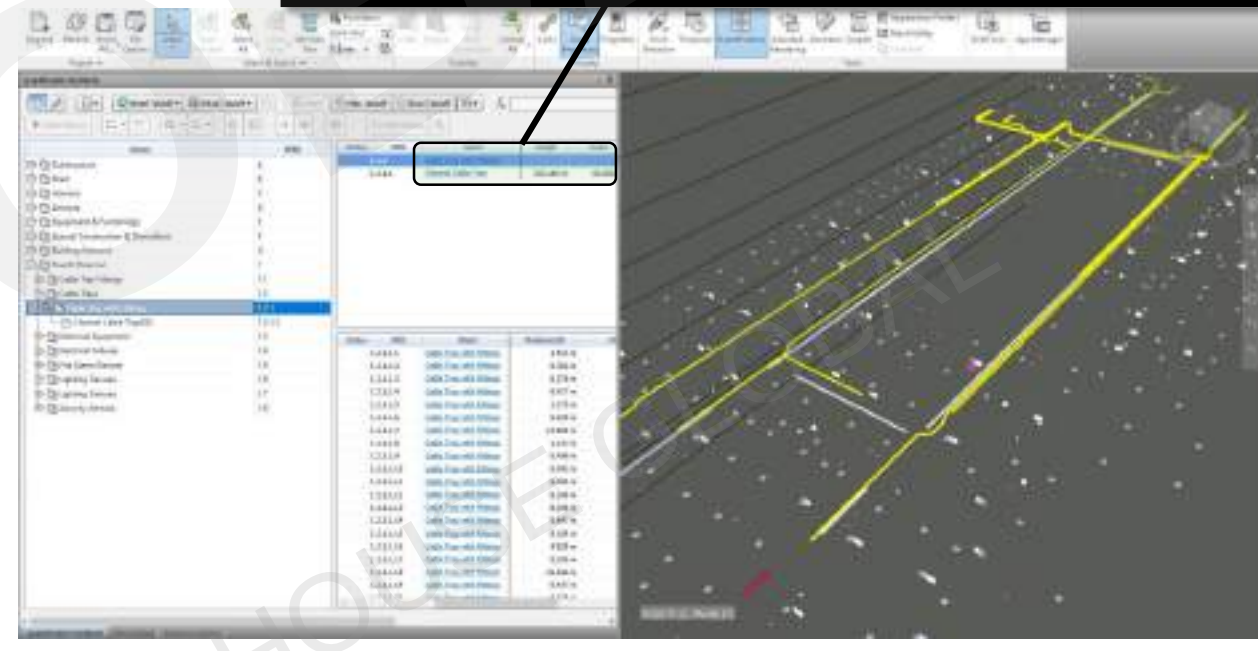


Quantities of Electrical

Item	Description	Qty	Unit
A. CABLE TRAY			
i.	100 mm X 40 mm	175.393 mtr.	
ii.	300 mm X 50 mm	44.493 mtr.	
iii.	450 mm X 50 mm	12.180 mtr.	
B. CABLE TRAY FITTING			
1) HORIZONTAL TEE JOINT			
i.	100 mm X 40 mm Dia	3 Nos	
ii.	300 mm X 50 mm Dia	2 Nos	
iii.	450 mm X 50 mm Dia	1 Nos	
2) HORIZONTAL BEND JOINT			
i.	100 mm X 40 mm Dia	12 Nos	
ii.	300 mm X 50 mm Dia	3 Nos	
iii.	450 mm X 50 mm Dia	1 Nos	
3) VERTICAL INSIDE BEND			
i.	100 mm X 40 mm Dia	16 Nos	
ii.	300 mm X 50 mm Dia	4 Nos	
iii.	450 mm X 50 mm Dia	1 Nos	
4) VERTICAL OUTSIDE BEND			
i.	100 mm X 40 mm Dia	18 Nos	
ii.	300 mm X 50 mm Dia	4 Nos	
C. FIRE ALARM DEVICE			
i.	Ceiling Recessed Speaker	11 Nos	
ii.	FI Module	1 Nos	
iii.	Multi Criteria Detector	2 Nos	
iv.	Smoke Detector Above	66 Nos	
v.	Smoke Detector Below	27 Nos	
D. LIGHTING DEVICE / FIXTURE			
i.	OS Sensor	2 Nos	
ii.	10 W LED CEILING LIGHT	10 Nos	
iii.	20W LED CEILING LIGHT	85 Nos	
iv.	13W LED CEILING LIGHT	57 Nos	
v.	20W LED CEILING LIGHT	76 Nos	
vi.	15W LED CEILING (Hanging Light)	49 Nos	
vii.	36W LED CEILING LIGHT	176 Nos	
viii.	Emergency Light	73 Nos	
ix.	Tube Wall mounted	2 Nos	
E. SECURITY DEVICE			
i.	Bullet Camera	10 Nos	
TOTAL CARRIED TO SUMMARY			



Name	Length	Count
Cable Tray with Fittings		
Channel Cable Tray	232.166 m	83,000



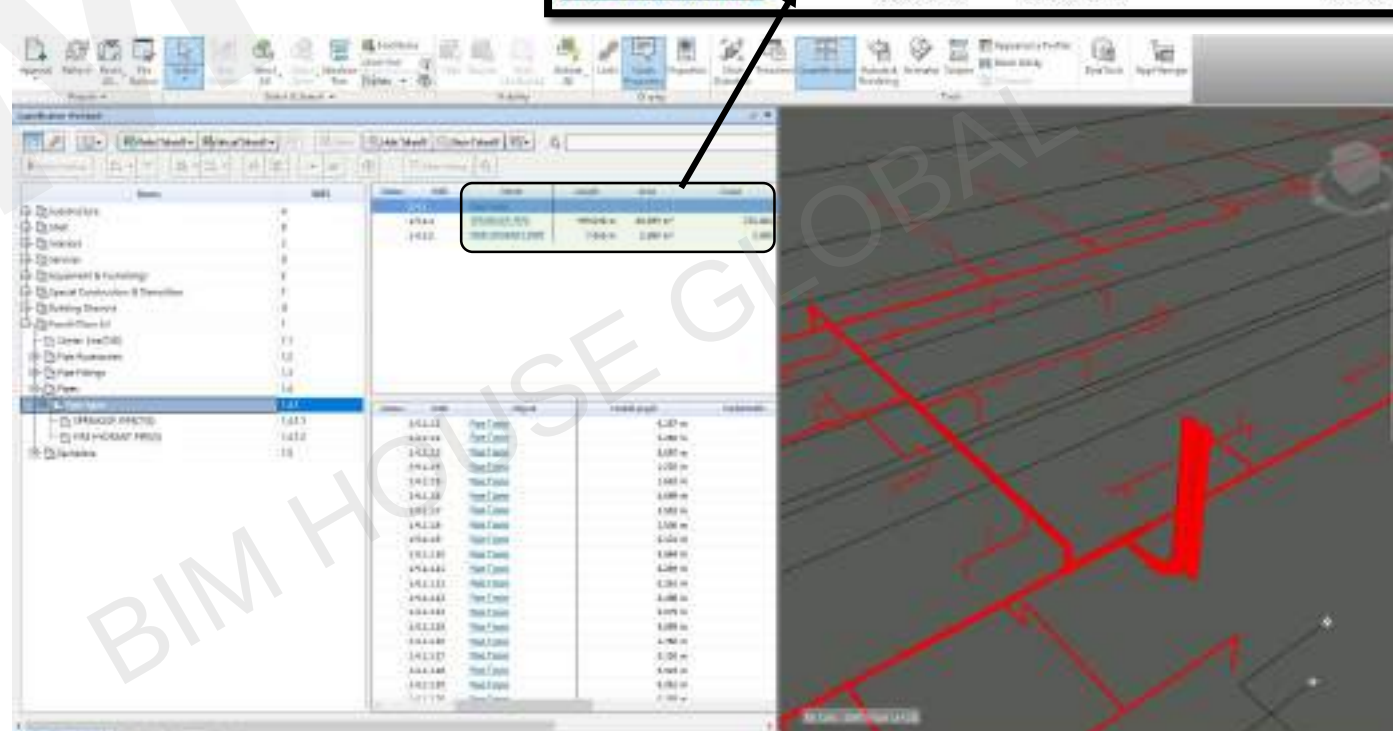
Quantities of Fire Fighting

Item	Description	Qty	Unit
A. HYDRANTS / SPRINKLE PIPING			
MS 'C' Heavy class pipe			
i.	25 mm Dia	282.229 mtr	
ii.	32 mm Dia	28.107 mtr	
iii.	40 mm Dia	71.726 mtr	
iv.	50 mm Dia	34.229 mtr	
v.	65 mm Dia	46.322 mtr	
vi.	80 mm Dia	11.544 mtr	
vii.	100 mm Dia	19.850 mtr	
viii.	150 mm Dia	12.869 mtr	
B. SPRINKLE			
Pendent Sprinkle			
i.	15 mm Dia	143 Nos	
Upright Sprinkle			
ii.	25 mm Dia	72 Nos	
C. PIPE FITTING			
MS 'C' Heavy class pipe			
1) ELBOW JOINT			
i.	25 mm Dia	219 Nos	
ii.	32 mm Dia	9 Nos	
iii.	40 mm Dia	41 Nos	
iv.	50 mm Dia	10 Nos	
v.	65 mm Dia	3 Nos	
vi.	80 mm Dia	2 Nos	
vii.	100 mm Dia	3 Nos	
viii.	150 mm Dia	3 Nos	
2) CROSS JOINT FITTING			
i.	25 mm Dia	1 Nos	
ii.	40 mm Dia	4 Nos	
iii.	50 mm Dia	1 Nos	
iv.	100 mm Dia	2 Nos	
3) REDUCER FITTING			
i.	25 mm to 15 mm Dia	214 Nos	
ii.	32 mm to 25 mm Dia	15 Nos	
iii.	40 mm to 25 mm Dia	38 Nos	
iv.	40 mm to 32 mm Dia	14 Nos	
v.	50 mm to 25 mm Dia	7 Nos	
vi.	50 mm to 40 mm Dia	15 Nos	
vii.	65 mm to 50 mm Dia	8 Nos	
viii.	80 mm to 65 mm Dia	2 Nos	
ix.	100 mm to 25 mm Dia	4 Nos	



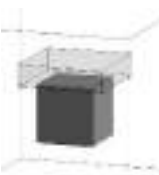
Sprinkle

Name	Length	Area	Count
Pipe Types			
SPRINKLER PIPE	499.046 m	60.849 m²	735,000
FIRE HYDRANT PIPE	7.365 m	2.899 m²	3,000

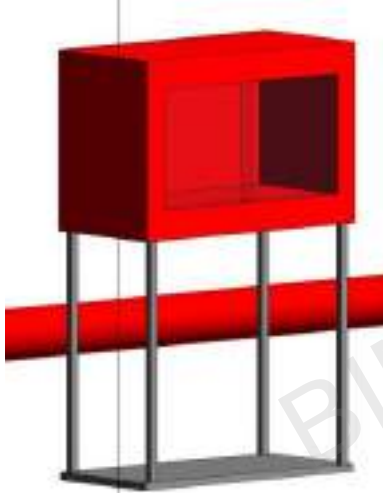


Quantities of External Site Plan

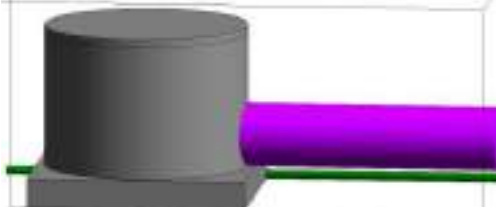
Item	Description	Qty	Unit
QUANTITIES OF ELECTRICAL			
A. HUME PIPE			
i.	150 mm Dia	18.098 mtr.	
ii.	200 mm Dia	54.293 mtr.	
iii.	300 mm Dia	106.731 mtr.	
B. HUME PIPE FITTING			
Elbow			
i.	300 Dia	10 Nos	
C. CABLE			
i.	4C x 10 Sqmm Al Cable	306,096 mtr.	
D. ELECTRICAL EQUIPMENT / DEVICE			
i.	E-Start Pt	55 Nos	
ii.	OG Set (TSG-04)	2 Nos	
iii.	1250 kVA Transformer	1 Nos	
E. ELECTRICAL FIXTURE			
i.	Ceiling Fan	2 Nos	
ii.	Switch Board	2 Nos	
iii.	SA Switch Socket	2 Nos	
iv.	10A Switch Socket	2 Nos	
v.	20W Wall Mounted	4 Nos	
vi.	30W LED Tube Light	27 Nos	
F. MAN HOLE FOR CABLES			
i.	1200mm x 1000mm, 1200mm high	2 Nos	
ii.	1200mm x 600mm	1 Nos	
G. SECURITY DEVICE			
i.	P12 CCTV Camera	9 Nos	
TOTAL CARRIED TO SUMMARY			



Item	Description	Qty	Unit
QUANTITIES OF FIRE FIGHTING			
A. FIRE HYDRANTS PIPE			
MS 'C' Heavy class pipe			
i.	80 mm Dia	4.885 mtr	
ii.	100 mm Dia	0.722 mtr	
iii.	150 mm Dia	464.174 mtr	
B. PIPE FITTING			
MS 'C' Heavy class pipe			
Elbow Bend			
i.	80 mm Dia	6 Nos	
ii.	100 mm Dia	2 Nos	
iii.	150 mm Dia	57 Nos	
Tee Joint Fitting			
i.	80 mm Dia	13 Nos	
ii.	150 mm Dia	13 Nos	
Check Valve			
i.	150mm Dia	1 Nos	
C. FIRE HYDRANT ACCESSORY			
External Fire Hydrant (EFH)			
i.	80mm Dia MS Pipe	6 Nos	
External Fire Hose Cabinet (EFHC)			
i.	80mm Dia MS Pipe	8 Nos	
2-Way Fire Brigade			
i.	100mm Dia with cap and chain	2 Nos	
4-Way Fire Brigade			
i.	150mm Dia with cap and chain	4 Nos	
TOTAL CARRIED TO SUMMARY			



Item	Description	Qty	Unit
QUANTITIES OF PLUMBING			
A. Garden Hydrant (GH Pipe)			
i.	25 mm Dia	8.791 mtr.	
ii.	32 mm Dia	43.175 mtr.	
iii.	40 mm Dia	48.820 mtr.	
iv.	50 mm Dia	101.542 mtr.	
B. Municipal Supply Pipe			
i.	65 mm Dia	24.316 mtr.	
C. Tanker Supply Pipe			
i.	65 mm Dia	24.827 mtr.	
D. Borewell Water Pipe			
i.	80 mm Dia	70.841 mtr.	
ii.	100 mm Dia	91.892 mtr.	
E. Pipe Fitting (GH, Municipal, Tanker & Borewell Pipe)			
Elbow Bend			
i.	25 mm Dia	2 Nos	
ii.	32 mm Dia	4 Nos	
iii.	40 mm Dia	7 Nos	
iv.	50 mm Dia	7 Nos	
v.	65 mm Dia	16 Nos	
vi.	80 mm Dia	10 Nos	
vii.	100 mm Dia	6 Nos	
Reducer			
i.	32 mm to 25 mm Dia	1 Nos	
ii.	40 mm to 32 mm Dia	1 Nos	
iii.	50 mm to 40 mm Dia	1 Nos	
iv.	100 mm to 80 mm Dia	1 Nos	
Tee Branch			
i.	32 mm Dia	1 Nos	
ii.	40 mm Dia	3 Nos	
iii.	65 mm Dia	1 Nos	
TOTAL CARRIED TO SUMMARY			
F. DRAINAGE			
STORM WATER PIPE			
i.	200 mm Dia	62.791 mtr.	
ii.	400 mm Dia	160.357 mtr.	
G. Pipe Fitting (Storm Water Pipe)			
Elbow Joint			
i.	400 mm Dia	3 Nos	
H. Man Hole (Circular)			
i.	910 Dia	9 Nos	
I. Man Hole (Rectangular)			
i.	900mm x 450mm	1 Nos	
J. Rain Water Harvesting Pt			
i.		2 Nos	
TOTAL CARRIED TO SUMMARY			



BIM HOUSE GLOBAL

THANK YOU