PASMEC

BIM &ENGINEERING CONSULTANT

Architecture BIM services,• Structure BIM services,•Interior design & 3D BIM modeling, •BIM services coordination & clash detection,• Mechanical & Electrical room coordinated 3D model,• Point Cloud,• 3D BIM Rendering,• Design Validation & Value Engineering,•2D Installation drawings,• As-built drawing,• Bar Bending Schedule (BBS),• Quantity Take-Off (QTO) &•Cad services.

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Visit us: www.pasmecbim.com

COMMITMENT

WE ARE COMMITED TO OUR CORE VALUES AND CORPORATE MISSION:

- ✓ MAXIMIZE CLIENT VALUE BY ADOPTING THE LATEST TECHNOLOGIES AND INNOVATIONS.
- ✓ IMPROVE PROJECT EFFCIENCY BY STREAMLINING WORKFLOW AND PROVIDE HIGH QUALITY SERVICES.
- ✓ SAVE TIME BY USING A LARGE GLOBAL TEAM TO LEVERAGE TIME ZONE ADVANTAGE.
- ✓ REDUCE CLIENT COST BY HARNESSING A HIGHLY EXPERIENCED GLOBAL WORK FORCE.

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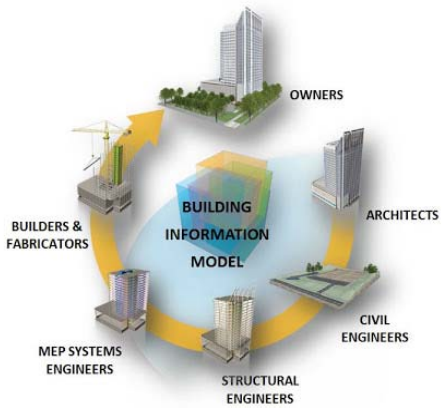


PASMEC is an emerging BIM consultant company dedicated and sincere providing higher quality services to each of its clients with advance, innovative and customized solutions in the project. Our main focus is to assist our valuable clients right from pre-concept until the handover of the facility.

Our BIM Engineers are highly qualified with extensive experience in the construction industry. Each member of our team has his proven track record successful completion of various building projects(High Rise buildings, ResidentialTown, Educational institutions, Commercial buildings, Offices, Hospitals, and Healthcare, Sports Area, etc) of international repute in association with international consultant and contractors.

“SATISFIED CLIENT IS OUR ULTIMATE GOAL”

BIM & DESIGN SERVICES:

❖ ARCHITECTURE:-

Our BIM Services & 3D BIM Model allow Architectural, Structure, and Interior decoration to review design elements concerning the building systems and other services in the project.

Our BIM Services & 3D BIM Model make better design decision earlier in the process with insight into what your design represent through visualization, coordination, collaboration, and analysis tools.

By using our BIM Services & 3D BIM Model, you can plan and visualization the entire project during pre-construction, before the shovel hits the ground. Space use simulations and 3D BIM Model allow clients to experience what space will look like offering the ability to make a change before the construction start. Having a great overview from the beginning minimizes project costs and time-consuming.

❖ STRUCTURE:-

Our BIM Services & 3D BIM Model allow Structural designer to review design elements concerning to the building systems and other services in the project.

Our BIM Services & 3D BIM Model make better design decision earlier in the process with insight into what your design represent through visualization, coordination, collaboration, and analysis tools.

By using our BIM Services & 3D BIM Model, you can plan and visualization the entire project during pre-construction, before the shovel hits the ground. Space use simulations and 3D BIM Model allow clients to experience what space will look like offering the ability to make a change before the construction start. Having a great overview from the beginning minimizes project costs and time-consuming.

• INTERIOR DECORATION & 3D BIM MODELING:-

Our Interior design & 3D BIM Model allow contractors to review design elements concerning the building systems and other services in the project.

Our Interior design & 3D BIM Model make better design decision earlier in the process with insight into what your design represent through visualization, coordination, collaboration, and analysis tools.

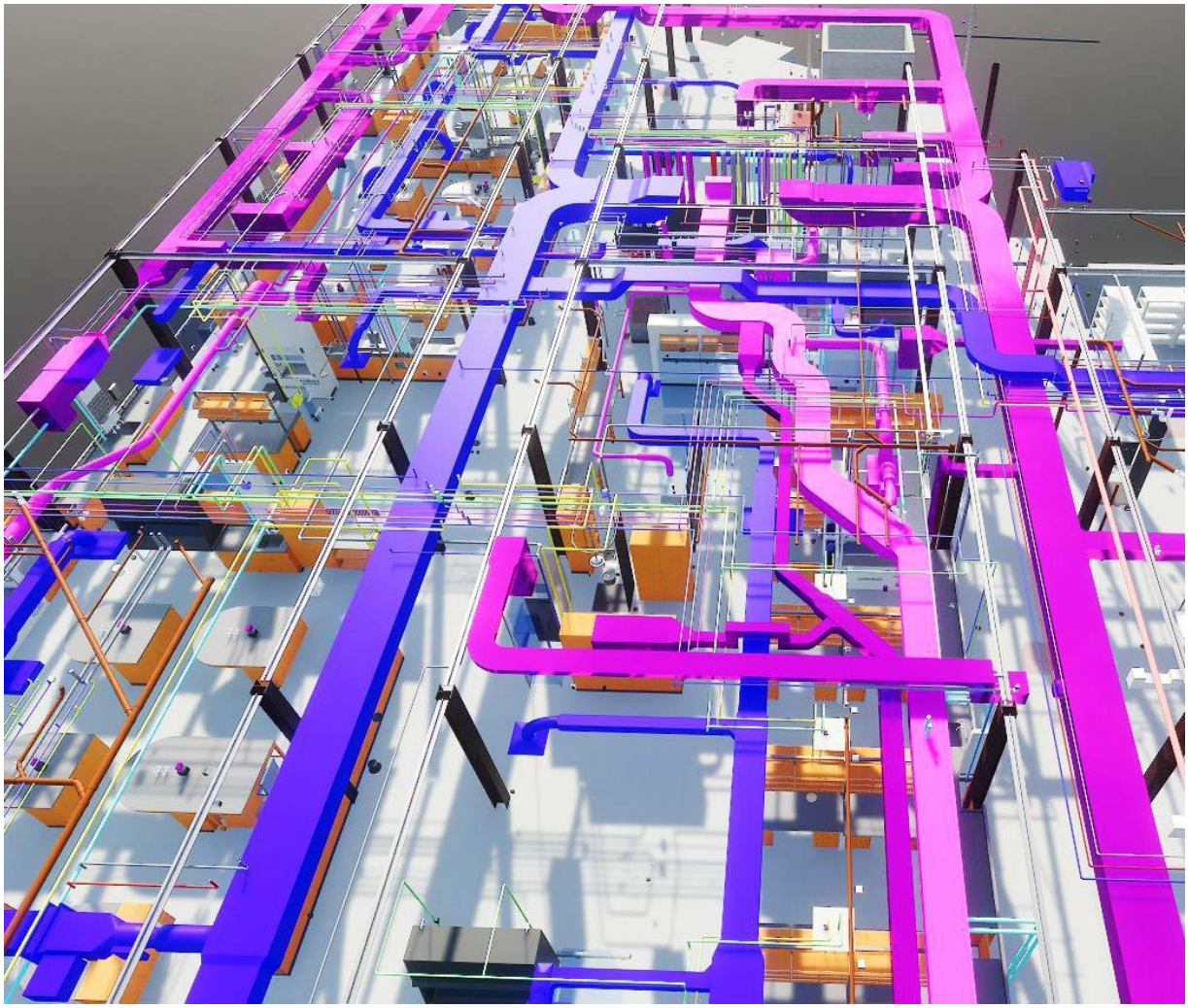
By using Our Interior design & 3D BIM Model, you can plan and visualization the entire project during pre-construction, before the shovel hits the ground. Space use simulations and 3D BIM Model allow clients to experience what space will look like offering the ability to make a change

before the construction start. Having a great overview from the beginning minimizes project costs and time-consuming.

- **MECHANICAL, ELECTRICAL & PLUMBING:-**

MEP means Mechanical, Electrical & Plumbing. While BIM which means building information modeling. MEP is one kind of part where the whole thing to be coordinated with each discipline and also coordinate architecture and structure too into the design. While BIM is representing a physical characteristic of a facility to give the design firm and construction industry.

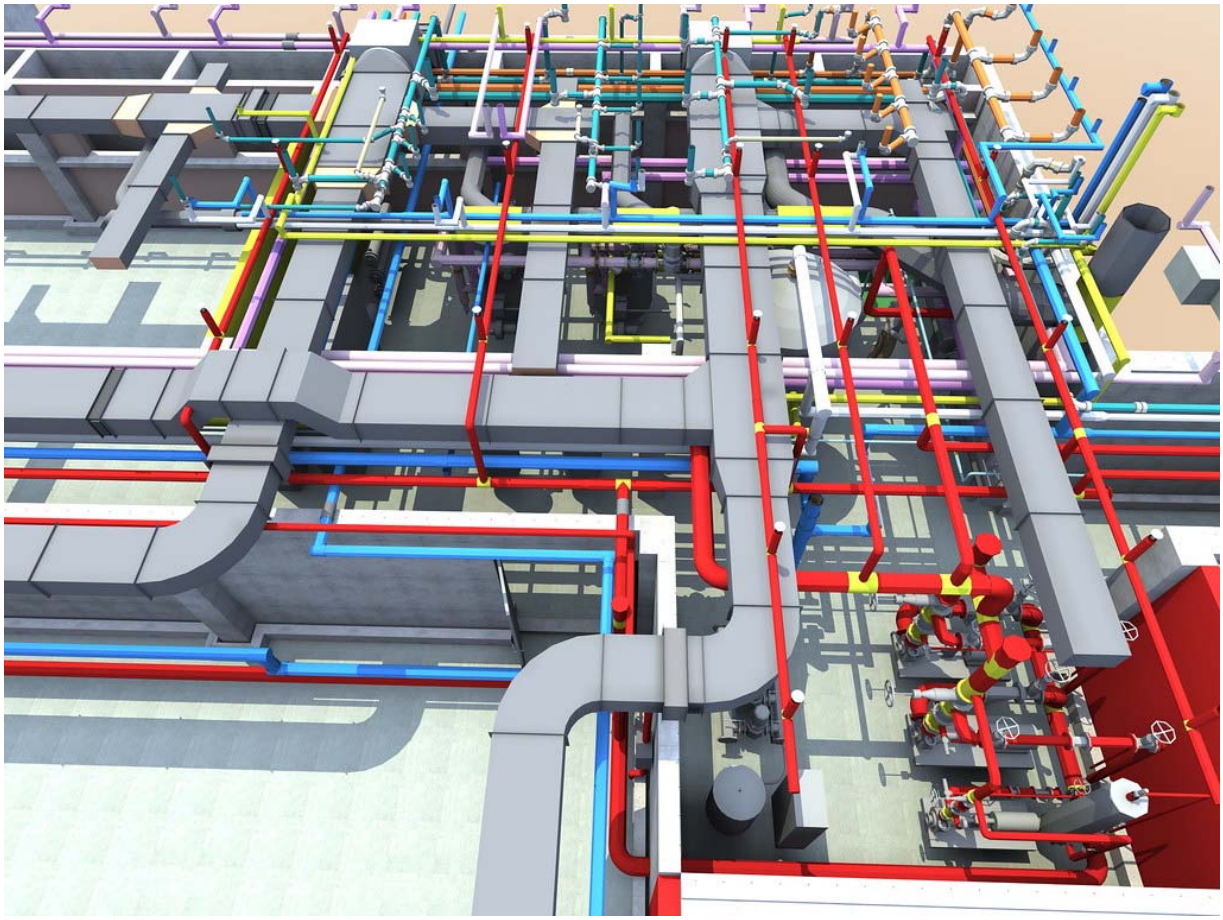
Proper planning and coordination are the keys to the successful execution of the project in the construction industry. Building information modeling (BIM) allows us to create and examine the virtual representation of the Mechanical, Electrical, and Plumbing systems and other utilities. The simulated 3D construction can be used to show design intent to clients with greater visualization, make coordinated drawings for eliminating rework & save time, and also reduce the project cost.



- **BIM COORDINATION& CLASH DETECTION:-**

We are specialized in performing detection among various trade and services, coordination with other trade using input like project drawing layout, specification sheet.

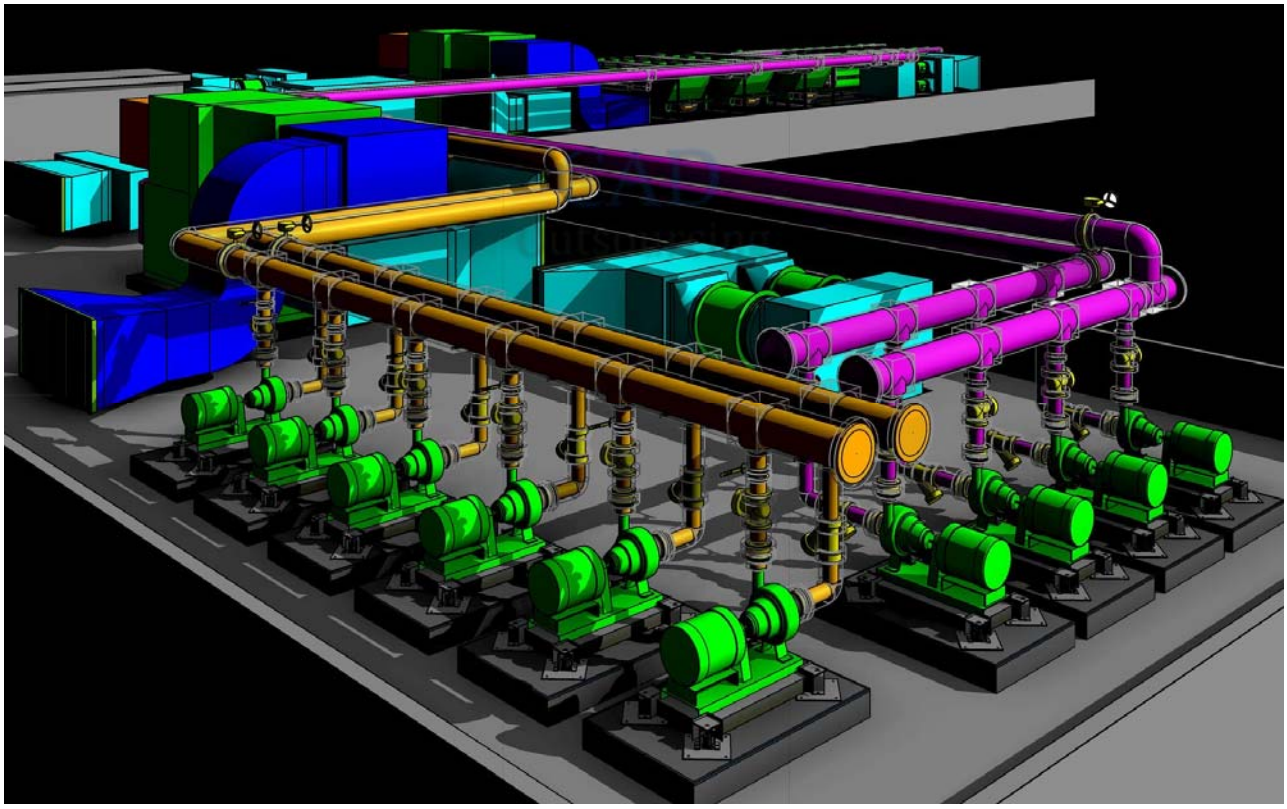
This virtual coordination before initiation of installation at the site helps the client to rectify the errors & difficulties, help resource-saving and time, and proper mobilizing of the people working at the site.



- **MECHANICAL & ELECTRICAL ROOM COORDINATED MODEL:-**

We are specialized in performing detection among various trade and services, coordination with other trade using input like project drawing layout, specification sheet.

This virtual coordination before initiation of installation at the site helps the client to rectify the errors & difficulties, help resource-saving and time, and proper mobilizing of the people working at the site.



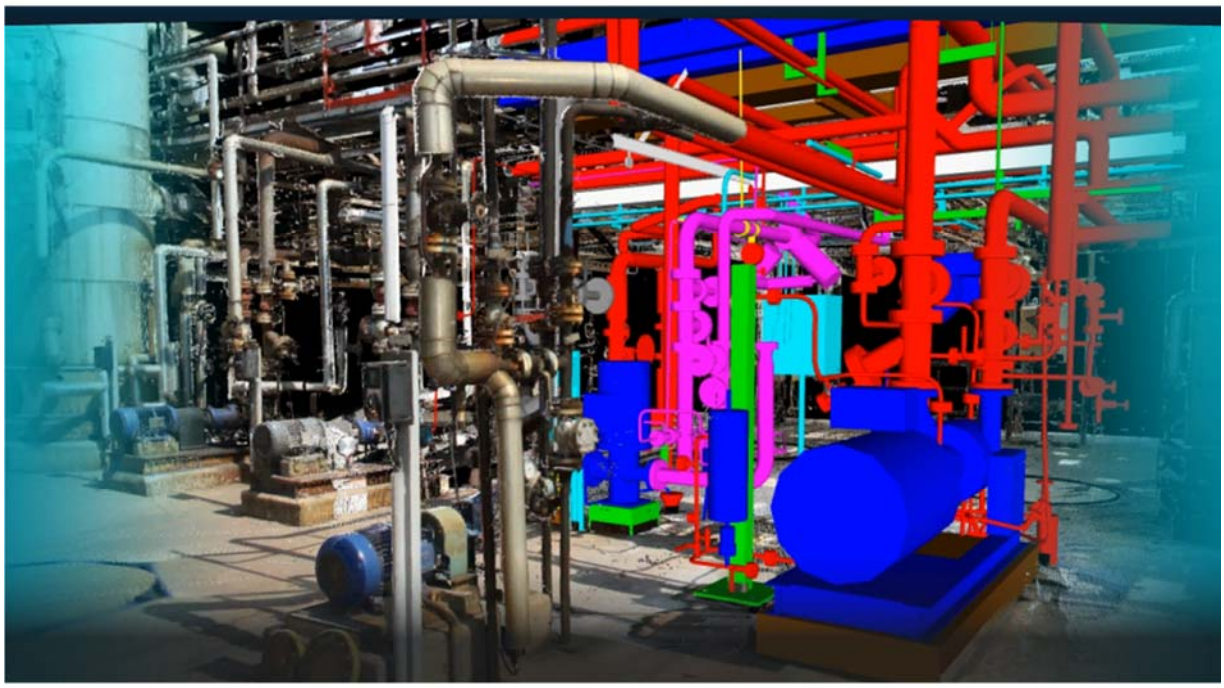
- **POINT CLOUD:-**

Our point cloud to BIM services creates accurate for as-built purposes as well as for refurbishment and renovation projects. Point cloud modeling is widely recognized to be more precise than the traditional survey that uses measuring tools.

The 3D laser scanning technology first captures the as-built environment, then we import the survey data and process it by using software Autodesk Revit.

Our BIM expert can accurately transform point cloud data into a virtual model which is helpful to 3D laser scanning companies a design-build contractor involved in the renovation of building structure with other MEP services.

Our services are cost-effective to give better build cost estimates to reduce errors.



- **3D BIM RENDERING:-**

PASMEC provides 3D BIM Rendering services to Architecture firms, Interior designers, Builders, and Real estate. We specialized create highly detailed, realistic 3D architecture rendering on projects around the world ranging from various industries by collaborating with architects, designers, developers, and builders.

We provide 3D rendering with the exact design, material, and lighting specification of your scheme, including people, vegetation, fixtures, fitting, furniture, etc. We have expertise in 3D MAX, VRay, Revit, and other rendering software.

1. 3D Exterior rendering & Interior rendering.
2. Photorealistic 3D Architectural rendering.
3.3D Architectural animation.
4.Architectural flyby and walkthrough.
5.Landscape designing.

• DESIGN VALIDATION & VALUE ENGINEERING:-

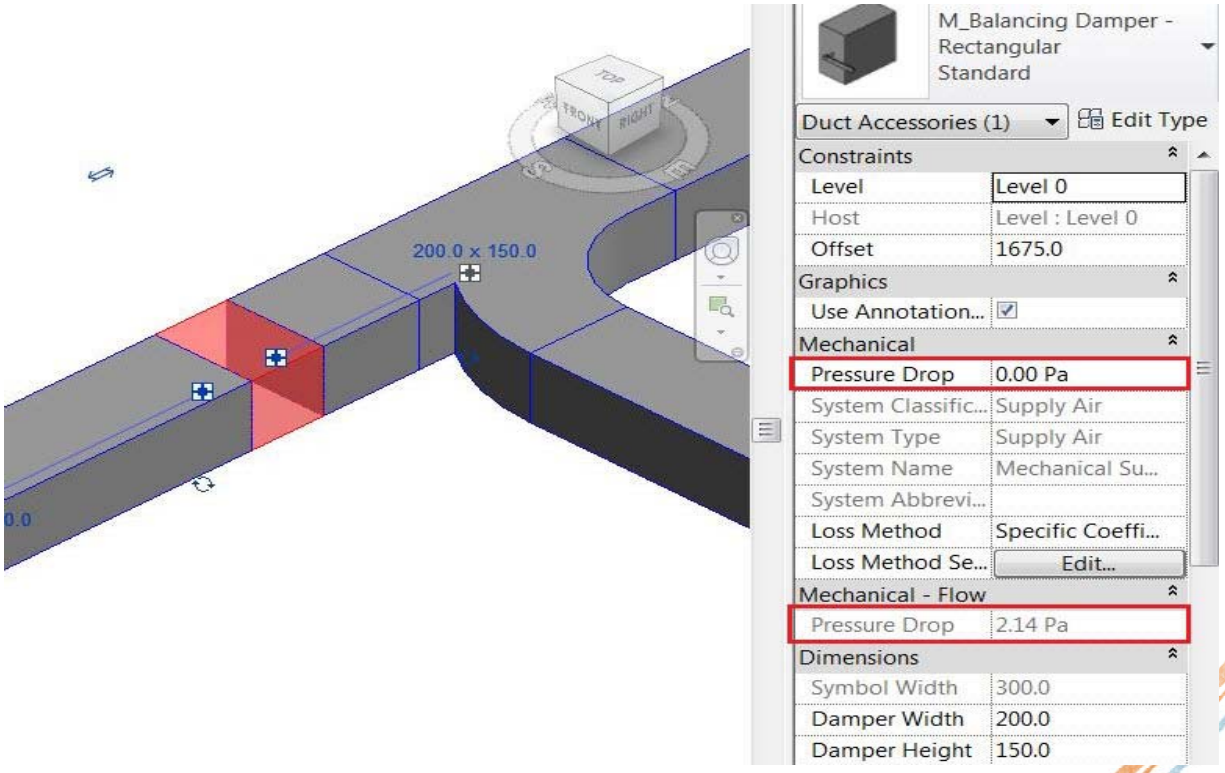
• VALUE ENGINEERING:

Value engineering can be defined as an organized effort directed an analyzing designed building features, system, equipment, and material selection to achieve essential at the life cycle cost consistent with required performance, quality, reliability, and safety.

Our creative in-house brainstorming helps to re-design MEP layout and save time for contractor or design consultant. We make proper spacing and posting of hanger for maximum load-bearing and coast optimization.

• BENEFITS OF VALUE ENGINEERING:

- Improves system effective & constructability.
- Reduce the material &labour coast.
- Lower installation time.
- Solve constructability issues.



- **DESIGN VALIDATION:-**

We help clients from the design concept stage itself by providing various design calculations namely heat-load calculation, pressure drop calculation, pump head calculation, electrical lighting & power load calculation, etc. And parallel creating a virtual design 3D Model for consultant &designer review by maintaining all international & local standards.

- **LOAD CALCULATION:-**

Accurate load calculation has a direct impact on energy efficiency, Occupantcomfort, Indoor air quality, and building durability. The load calculation is the first step of the iterative HVAC design procedure as a full HVAC design involves much more than just the load calculation. The load modeled by the heating and cooling load calculation process will dictate the equipment selection and duct design to deliver conditioned air to the rooms of the house.

Our engineer using HAP & REVIT Software for calculation heating and cooling load.

Zone Sizing Summary for SRAC-T-STP-01

Project Name: KING SALMAN SPECIALIZED HOSPITAL IN TAIF — 03/09/2020
Prepared by: SASEI SAUDI — 09:56AM

Air System Information

Air System Name SRAC-T-STP-01
Equipment Class ..... TERM
Air System Type ..... SPLT-FC
Number of zones 1
Floor Area ..... 12.8 m²
Location ..... Taif, Saudi Arabia

Sizing Calculation Information

Zone and Space Sizing Method:
Zone L/s ..... Sum of space airflow rates
Space L/s ..... Individual peak space loads
Calculation Months ..... Jan to Dec
Sizing Data ..... Calculated

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (kW)	Design Air Flow (L/s)	Minimum Air Flow (L/s)	Time of Peak Load	Maximum Heating Load (kW)	Zone Floor Area (m²)	Zone L/(s-m²)
Zone 1	1.4	150	150	Jul 2300	0.3	12.8	11.70

Terminal Unit Sizing Data - Cooling

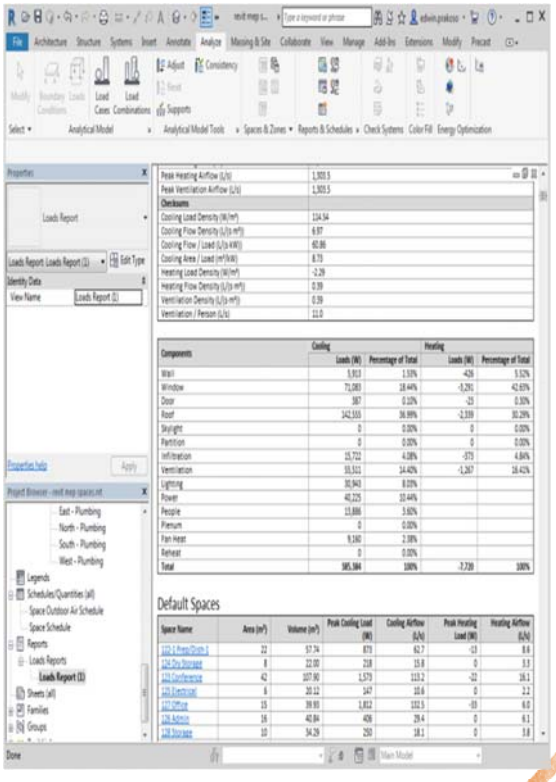
Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5.6 °K (L/s)	Time of Peak Load
Zone 1	1.8	1.8	27.9 / 15.5	16.0 / 11.3	-	Jul 1500

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @11.1 °K (L/s)	Fan Design Airflow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design Airflow (L/s)
Zone 1	0.9	17.0 / 22.8	-	150	0.000	0.000	39

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s-m²)
Zone 1							
LABORATORY	1	1.4	Jul 2300	150	0.3	12.8	11.70



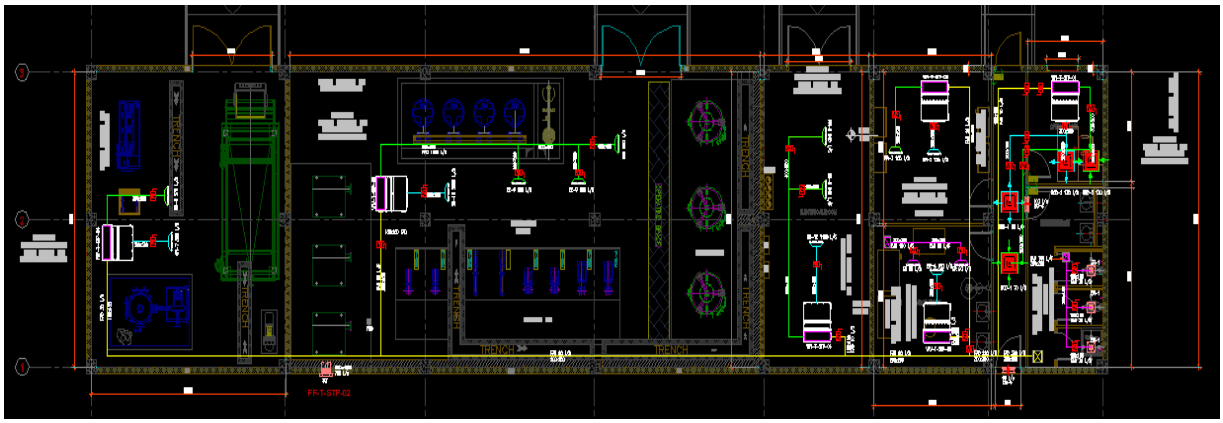
LOAD CALCULATION USING REVIT

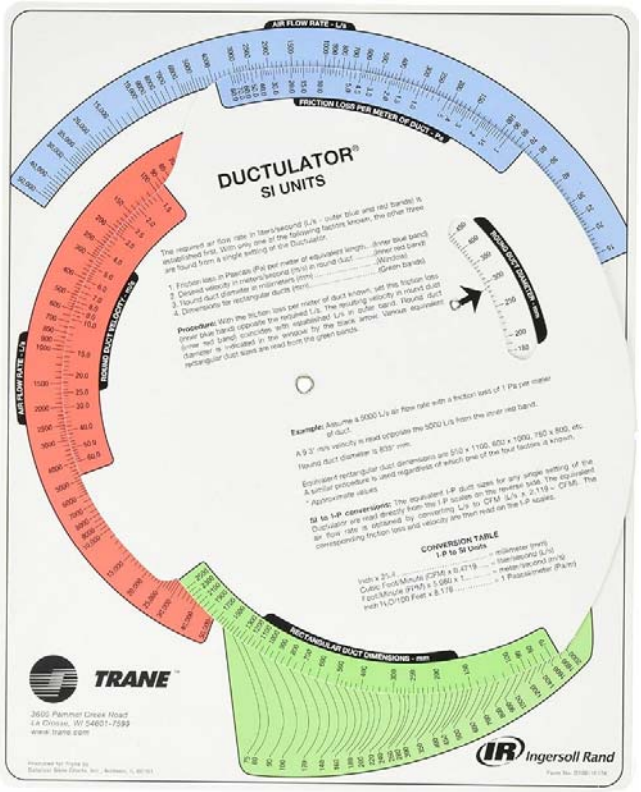
LOAD CALCULATION USING HAP

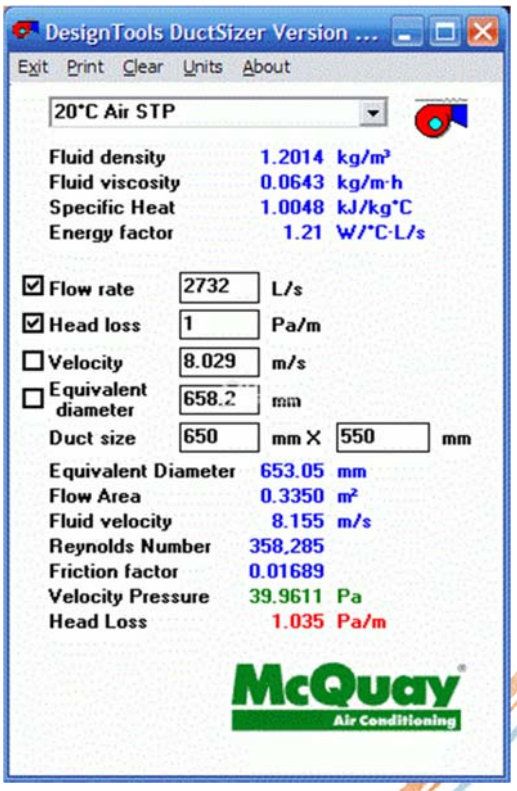
- **MECHANICAL DUCTING:-**

- **DUCT SIZING, DOUCT ROUTING, AND LAYOUT GENERATE:**

Duct sizing will be done concerning the volumetric flow. We provide the duct size based on air follow with the help of McQuay duct sizer, routing& layout creation. Will be done placing air terminal and sizing duct.

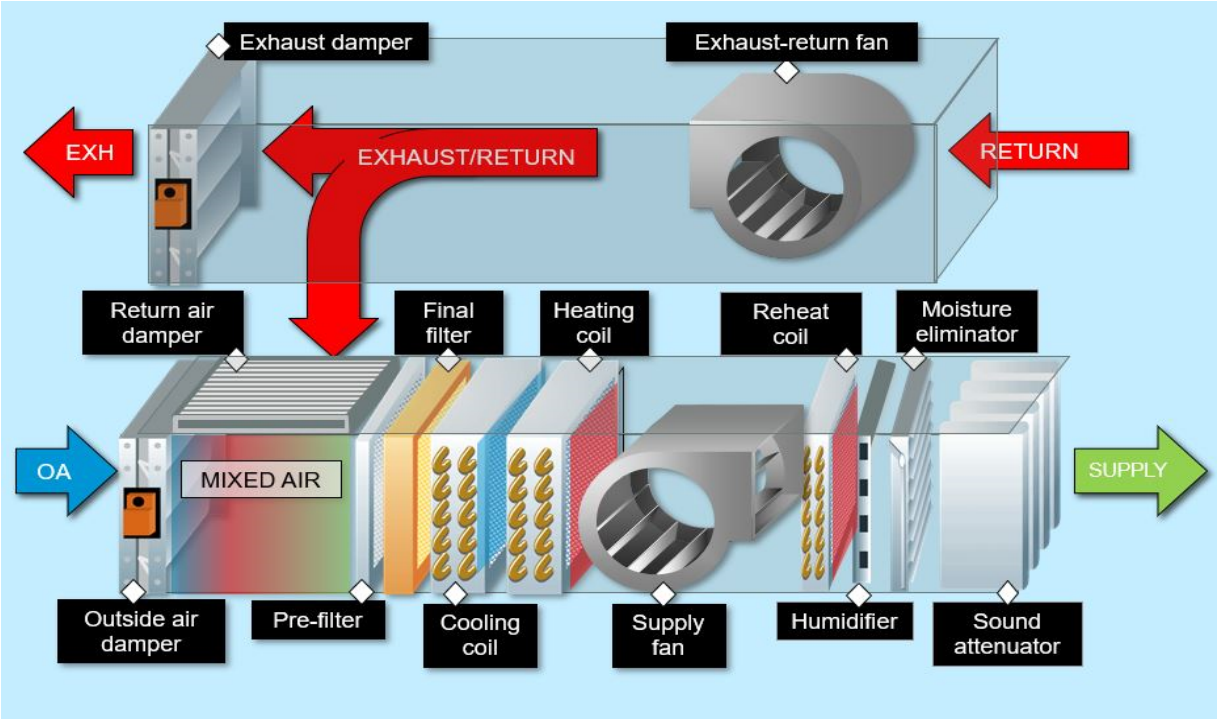






- **EQUIPMENT SELECTION:-**

Equipment selection based on load calculation & statics pressure loss.

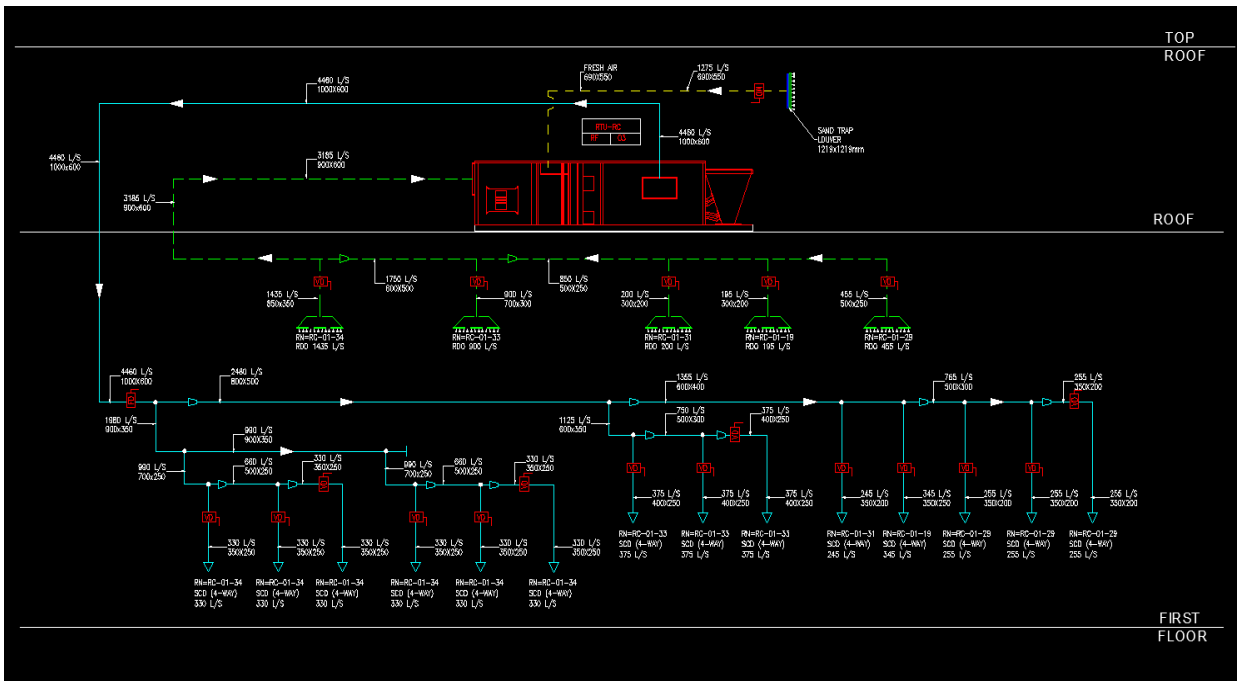


- **AIR TERMINAL SELECTION:**

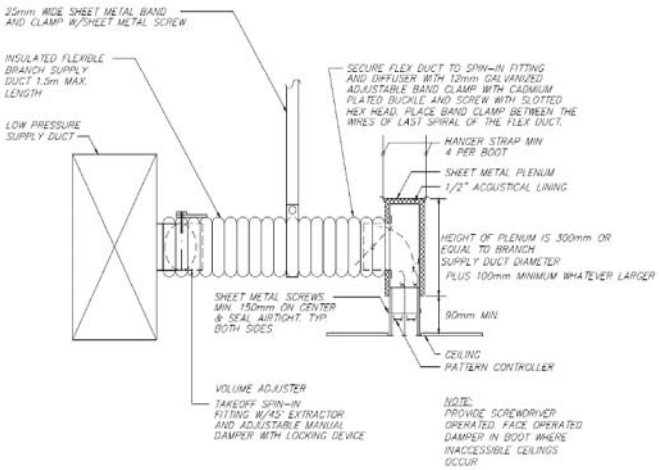
Afterload calculation, we can select each space air terminal with the help of standard manuals like air master, etc.

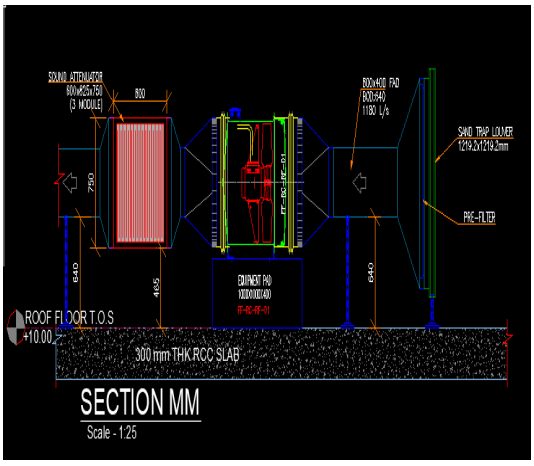
- **RISER & SCHEMATIC DRAWING:**

After duct sizing and duct layout creation. We can make riser or schematic drawing for flow balancing, every space maintain flow, etc. We can decide the help of riser or schematic drawing.



- **DETAIL, SECTION &ISOMETRIC DRAWINGS:**





DETAIL **SECTION**

▪ EXTERNAL STATIC PRESSURE CALCULATION (ESP):

External Static Pressure is the measurement of all the Resistance in the Duct system that the fan has to work against. Examples are Filters, Grils, A/C Coils, and the ductwork. It is the sum of the Suction Pressure (Negative) and Discharge Pressure (Positive) created by the equipment blower.

Our Engineer Calculate External Static Pressure by using Revit & Elite Software.

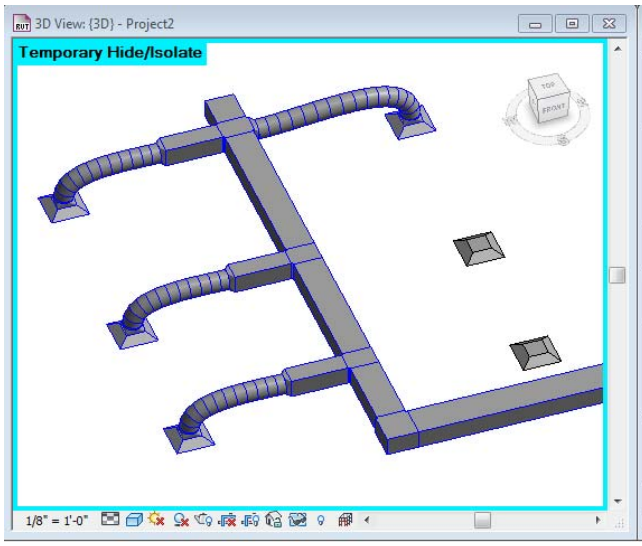
Equipment AHU -T-GE-B1-B1.1A

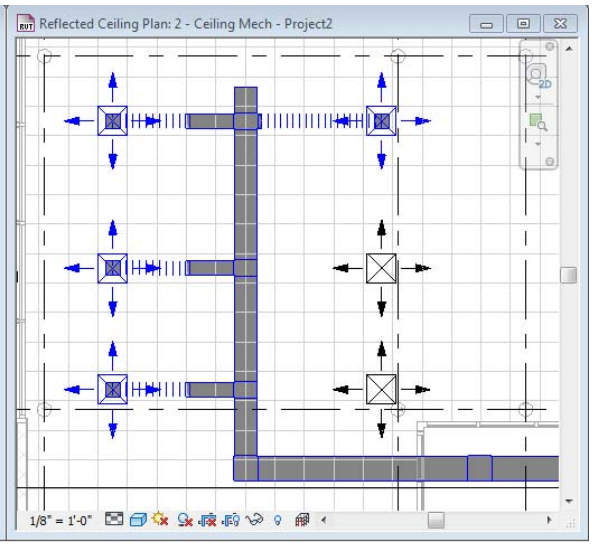
STATIC PRESSURE CALCULATION FOR AHU (01)						Flow rate						Fittings							
S No.	Description	Size in mm (width)	Size in mm (height)	Equ. DIAM. in mm.	Area in M2	m3/hr	l/s	velocity (m/s)	PD Per Meter	Length	PD x Length	90 Elbow	45 Elbow	Tee Main	Tee Branch	Other	Qty	coefficient factor	Total coefficient factor
AHU -T-GE-B1-B1.1A																			
Supply Air of 11320 L/S (Discharge Side)																			
1	Supply duct	4400	4400	4810	18.17	237600	66000	3.63	0.02	0.50	0.01					0.10	1	0.10	0.61
2	Supply duct	1100	600	878	0.61	15336	4260	7.03	0.54	21.02		0.52	0.74	0.04		0.04	1	1.34	
3	Supply duct	900	600	799	0.50	11952	3320	6.62	0.54	6.60				0.04		0.04	1	0.08	
4	Supply duct	800	550	722	0.41	8568	2380	5.81	0.48	11.53				0.08		0.04	1	0.12	
5	Supply duct	600	350	496	0.19	3456	960	4.96	0.57	4.06				0.04		0.04	1	0.08	
6	Supply duct	350	350	383	0.11	1728	480	4.17	0.57	4.27				0.04			1	0.04	
								TOTAL DUCT PD (Pa)			0.01					Fittings PD			0.61
								Supply Register PD (Pa)			10.00								
								Motorized Volume Damper PD (Pa)			10.00								
								Fire Damper PD (Pa)			75.00								
								Fittings PD			0.61								
								Total PD In (Pa)			95.62								

Page 1

Return Air Circuit												Fittings							
S No.	Description	Size in mm (width)	Size in mm (height)	Equ. DIAM. in mm.	Area in M2	m3/hr	l/s	velocity (m/s)	PD Per Meter	Length	PD x Length	90 Elbow	45 Elbow	Tee Main	Tee Branch	Other	Qty	coefficient factor	Total coefficient factor
1	Return duct	500	350	455.50	0.16	2592	720	4.42	0.51	5.52	2.83			0.04		0.04	1	0.08	0.72
2	Return duct	800	350	566.56	0.25	8568	2380	9.44	1.56	17.85	27.88			0.08		0.04	1	0.12	4.90
3	Return duct	900	600	799.22	0.50	11952	3320	6.62	0.54	2.15	1.16		0.72	0.04		0.04	1	0.8	16.07
4	Return duct	1100	600	878.10	0.61	15336	4260	7.03	0.54	16.45	8.81	1.04		0.04		0.04	1	1.12	25.42
5	Return duct	1150	1150	1257.14	1.24	40248	11180	9.01	0.54	59.78	32.41	1.32		0.08			1	1.4	52.09
								TOTAL DUCT PD (Pa)			73.08					Fittings PD			99.19
								Return Square Diffuser PD (Pa)			10.00								
								Motorized Volume Damper			20.00								
								Fire Damper			75.00								
								Fittings PD			99.19								
								Total PD In (Pa)			277.27								

STATIC PRESSURE CALCULATION FOR AHU-T-AS-B1-01	IN Pascal
Supply Duct + Fittings	95.62
Return Duct + Fittings	277.27
Sum Of Supply Duct And Return Duct	372.89
Safety Factor	0.10
TOTAL PD (Pa)	410.18





- **MECHANICAL PIPING:**

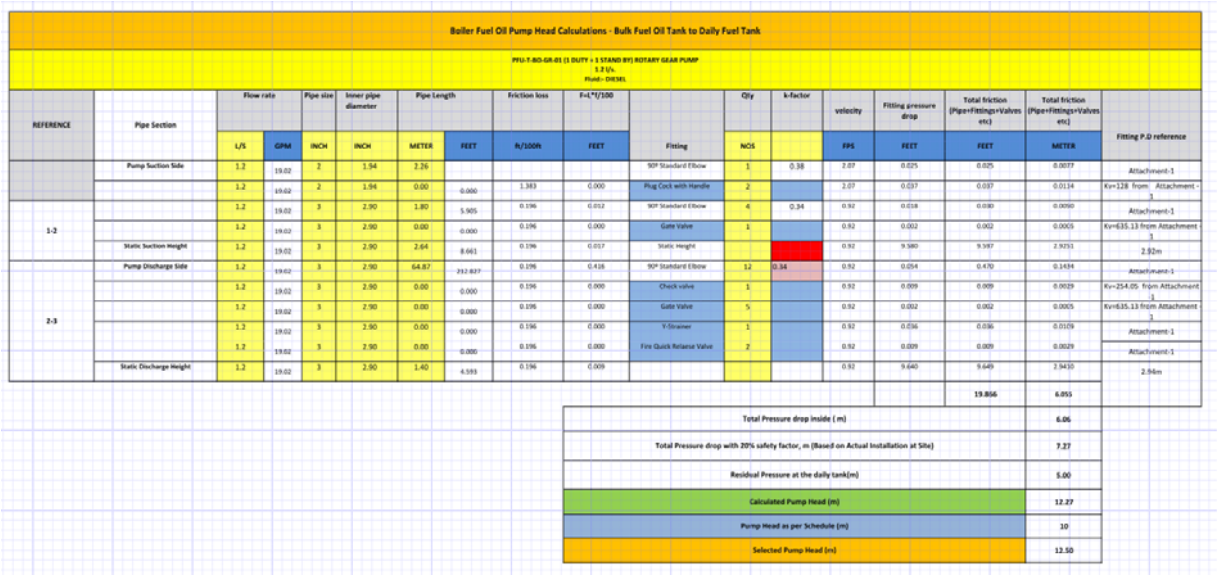
We prove to our clients below mention Calculation for Mechanical Piping.

1. Pump Head Calculation.

2. Pipe Sizzling and layout creation.

3. The riser of Schematic Drawing.

4. Detail, Section & Isometric Drawings.



Boiler Fuel Oil Pump Head Calculations - Bulk Fuel Oil Tank to Daily Fuel Tank

PFU-T-BO-GR-01 (1 DUTY + 1 STAND BY) ROTARY GEAR PUMP
1.2 l/s
Fluid:- DIESEL

REFERENCE	Pipe Section	Flow rate		Pipe size	Inner pipe diameter	Pipe Length		Friction loss	F=L*f/100	Fitting	Qty	k-factor	velocity	Fitting pressure drop	Total friction (Pipe+Fittings+Valves etc)	Total friction (Pipe+Fittings+Valves etc)	Fitting P.D reference
		L/S	GPM	INCH	INCH	METER	FEET	ft/100ft	FEET		NOS		FPS	FEET	FEET	METER	
	Pump Suction Side	1.2	19.02	2	1.94	2.26				90° Standard Elbow	1	0.38	2.07	0.025	0.025	0.0077	Attachment-1
		1.2	19.02	2	1.94	0.00	0.000	1.383	0.000	Plug Cock with Handle	2		2.07	0.037	0.037	0.0114	Kv=128 from Attachment - 1
1-2		1.2	19.02	3	2.90	1.80	5.905	0.196	0.012	90° Standard Elbow	4	0.34	0.92	0.018	0.030	0.0090	Attachment-1
		1.2	19.02	3	2.90	0.00	0.000	0.196	0.000	Gate Valve	1		0.92	0.002	0.002	0.0005	Kv=635.13 from Attachment 1
	Static Suction Height	1.2	19.02	3	2.90	2.64	8.661	0.196	0.017	Static Height			0.92	9.580	9.597	2.9251	2.92m
	Pump Discharge Side	1.2	19.02	3	2.90	64.87	212.827	0.196	0.416	90° Standard Elbow	12	0.34	0.92	0.054	0.470	0.1434	Attachment-1
		1.2	19.02	3	2.90	0.00	0.000	0.196	0.000	Check valve	1		0.92	0.009	0.009	0.0029	Kv=254.05 from Attachment 1
2-3		1.2	19.02	3	2.90	0.00	0.000	0.196	0.000	Gate Valve	5		0.92	0.002	0.002	0.0005	Kv=635.13 from Attachment 1
		1.2	19.02	3	2.90	0.00	0.000	0.196	0.000	Y-Strainer	1		0.92	0.036	0.036	0.0109	Attachment-1
		1.2	19.02	3	2.90	0.00	0.000	0.196	0.000	Fire Quick Release Valve	2		0.92	0.009	0.009	0.0029	Attachment-1
	Static Discharge Height	1.2	19.02	3	2.90	1.40	4.593	0.196	0.009				0.92	9.640	9.649	2.9410	2.94m
															19.866	6.055	

Total Pressure drop inside (m)	6.06
Total Pressure drop with 20% safety factor, m (Based on Actual Installation at Site)	7.27
Residual Pressure at the daily tank(m)	5.00
Calculated Pump Head (m)	12.27
Pump Head as per Schedule (m)	10
Selected Pump Head (m)	12.50

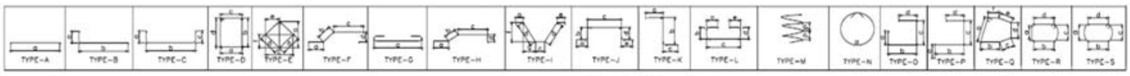
• BAR BENDING SCHEDULE (BBS):-

Bar Bending Schedule or Schedule of Bars (BBS) is a list of Reinforcement Bars for a given Reinforced Concrete work item and is presented in a Tabular Form for easy Visual Reference.

Table of Bar Bending Schedule Summarizes all the needed particulars of bars Diameter, Shape of Bending, Length of each bent and straight Portions, Angles of Bending, Total Length of each Bar, and Number of each type of Bar. This Information is a great help in preparing an estimate of quantities.

Bar Bending Schedule is when used along with Reinforcement detailed drawing improves the quality of construction, cost, and time-saving for concrete construction works.

Our Bar Bending Schedule (BBS) help all project stakeholders to enhance productivity and carry out constructability analysis.



Building		Prepared By	
Sheet No		Checked By	
Drawing Reference		Rev	00

BAR BENDING SCHEDULE OF FOOTING\PEDESTAL MKD. F3,F4,F5,F6,F7,F9 & F12 (FOUNDATION TO BASE MENT LEVEL) ZONE-2

NAME OF STRUCTURAL ELEMENT	BAR MARK	SHAPE CODE	BAR POSITION	BAR LOCATION	BAR DIA	NOS. OF ELEMENT	NOS. OF BARS PER ELEMENT	TOTAL NOS. OF BARS	TOTAL LENGTH IN M.	TOTAL LENGTH OF PER UNIT IN MM.	DIMENSION (mm)									HOOK ALLOW	BEND ALLOW	LENGTH OF BAR DIAWISE IN METRE									TOTAL WEIGHT (MT)	REMARKS
											a	b	c	d	e	f	g	h	i			6	8	10	12	14	16	20	25	32		
FOOTING F-03	1	C	B1	X-AXIS	20	28	20	560	2010.400	3590	430	2850	430								120							2010			4.955	
	2	C	B2	Y-AXIS	20	28	17	476	1708.840	3590	430	2850	430								120							1709			4.212	
	3	C	T1	X-AXIS	20	28	15	420	1507.800	3590	430	2850	430								120							1508			3.717	
	4	C	T2	Y-AXIS	20	28	21	588	2110.920	3590	430	2850	430								120							2111			5.203	
FOOTING F-04	1	C	B1	X-AXIS	25	10	20	200	952.000	4760	530	3850	530								150								952		3.667	
	2	C	B2	Y-AXIS	25	10	20	200	952.000	4760	530	3850	530								150								952		3.667	
	3	C	T1	X-AXIS	16	10	20	200	962.800	4814	530	3850	530								96						963				1.519	
	4	C	T2	Y-AXIS	16	10	20	200	962.800	4814	530	3850	530								96						963				1.519	
FOOTING F-05	1	C	B1	X-AXIS	25	14	29	406	2013.760	4960	630	3850	630								150								2014		7.756	
	2	C	B1	Y-AXIS	25	14	29	406	2013.760	4960	630	3850	630								150								2014		7.756	
	3	C	T1	X-AXIS	16	14	29	406	2035.684	5014	630	3850	630								96						2036				3.211	
	4	C	T2	Y-AXIS	16	14	29	406	2035.684	5014	630	3850	630								96						2036				3.211	
FOOTING F-06	1	C	B1	X-AXIS	25	3	52	156	820.560	5260	530	4350	530								150								821		3.160	
	2	C	B2	Y-AXIS	25	3	30	90	770.400	8560	530	7650	530								150								770		2.967	
	3	C	T1	X-AXIS	16	3	52	156	828.984	5314	530	4350	530								96						829				1.308	
	4	C	T2	Y-AXIS	16	3	30	90	775.260	8614	530	7650	530								96						775				1.223	
FOOTING F-12	1	C	B1	X-AXIS	25	1	52	52	351.520	6760	530	5850	530								150								352		1.354	
	2	C	B2	Y-AXIS	25	1	40	40	342.400	8560	530	7650	530								150								342		1.319	
	3	C	T1	X-AXIS	16	1	52	52	354.328	6814	530	5850	530								96						354				0.559	
	4	C	T2	Y-AXIS	16	1	40	40	344.560	8614	530	7650	530								96						345				0.544	
FOOTING-F9	1	C	B1	X-AXIS	16	3	52	156	719.784	4614	430	3850	430								96						720				1.135	
	2	C	B2	X-AXIS	16	3	30	90	757.260	8414	430	7650	430								96						757				1.195	
	3	C	T1	X-AXIS	16	3	52	156	719.784	4614	430	3850	430								96						720				1.135	
	4	C	T2	X-AXIS	16	3	30	90	757.260	8414	430	7650	430								96						757				1.195	
FOOTING F7	1	C	B1	X-AXIS	16	3	20	60	216.840	3614	430	2850	430								96						217				0.342	
	2	C	B2	X-AXIS	16	3	20	60	216.840	3614	430	2850	430								96						217				0.342	
	3	C	T1	X-AXIS	16	3	20	60	216.840	3614	430	2850	430								96						217				0.342	
	4	C	T2	X-AXIS	16	3	20	60	216.840	3614	430	2850	430								96						217				0.342	
																				TOTAL LENGTH IN M							12122	7338	8216			
																				@ Kg/m		0.22	0.39	0.62	0.89	1.21	1.58	2.46	3.85	6.31		
																				WEIGHT IN MT							19.122	18.087	31.645			
																				TOTAL WT (MT)											68.854	

• QUANTITY TAKE-OFF (QTO):-

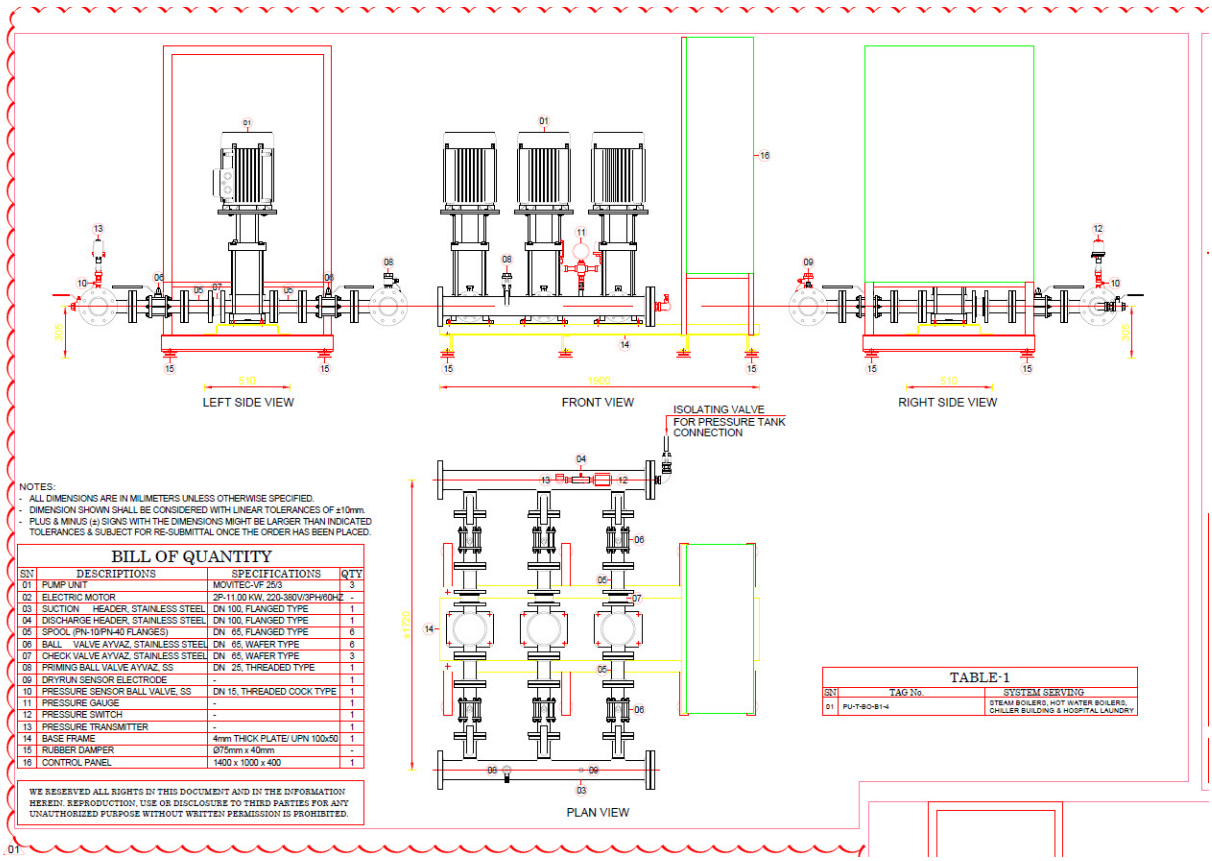
Quantity take-off (QTO) is a detailed measurement of materials and labor needed to complete Construction Projects. This process includes breaking the project down into smaller and more manageable units that are easier to measure or Estimate. The level of detail required for measurement may vary. These measurements are used to format a BID on the scope of construction. PASMEC review Drawings, specifications, and models are to find these quantities. With BIM quantity take-off can be conducted almost automatically given that the type of material, their quantity and price is included in the model. It is known that construction projects often run over time and budget and one of the reasons is lack of accuracy is quantity takeoff and estimates.

Quantities can be generated for a specific period or project area (4D/5D) to help manage material procurement and save inventory costs. Quantity take-off covers all DUCT, DUCT-FITTING, EQUIPMENT, HANGER, etc.

Duct Accessory Schedule			
Sl.No.	Damper Type	Size (in mm)	Quantity
1	Fire Damper	200x140-200x140	1
2		250x150-250x150	1
3		450x550-450x550	1
4		500x500-500x500	2
5	Volume control Damper	200x100-200x100	2
6		200x140-200x140	2
7		200x150-200x150	2
8		200x200-200x200	1
9		250x150-250x150	2
10		300x200-300x200	4
11		300x300-300x300	1
12		350x350-350x350	4
13		450x200-450x200	6
14		450x250-450x250	2
15		450x300-450x300	10
16		450x350-450x350	1
17		450x400-450x400	2
18		450x450-450x450	3
19		450x550-450x550	1
20		500x400-500x400	3
21		500x500-500x500	1
22		600x450-600x450	1
23		650x450-650x450	1
24		700x400-700x400	1
25		750x550-750x550	2
Grand Total			57

- **2D INSTALLATION DRAWING:-**

PASMEC specialized in preparing actual 2d installation drawings after coordinating with other trades. Showing elevation of the systems, tagging of systems & elements size & type, dimension and annotating, section and call out is shown on the drawings for congested area/part. Isometric and Riser drawings whole systems and buildings are prepared separately for engineer's reviews at the site for overall understanding of the project design systems.



- **AS-BUILT DRAWING:-**

An As-built drawing is a revised drawing created and submitted by a contractor after a construction project finished. They Contain any changes made from the initial drawing during the construction process and provide an exact rendering of the building and property as it appears upon completion.

PASMEC specialized in preparing actual As-built 3D model and As-built drawing from scanned paper drawings, survey data, or laser scan data.

• CAD SERVICES:-

2D drawing essential for communicating ideas in industry and engineering. To make the drawing easier to understand, people use familiar symbols, perspectives, units of measurement, notation systems, visual styles, and page layout.

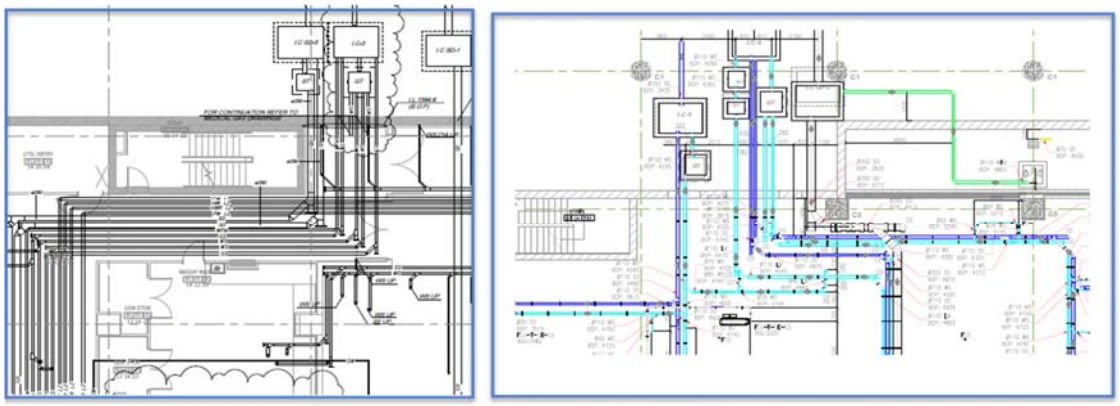
In cad services, we offer the below-mentioned services.

1.RASTER IMAGE TO CAD CONVERSION:

We specialized in the conversion of legacy paper drawings into accurate CAD drawings as per client CAD standards or as per the prevalent International Standards.

Input Format: TIF, PDF, CAL, JPEG

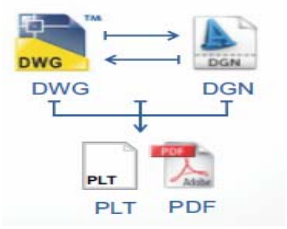
OUTPUT FORMAT: AUTOCAD



INPUT-RASTER IMAGE

OUTPUT-CAD .DWG FILE

2.FILE FORMAT CONVERSION:



A. We convert DWG files DGN files and Vice Versa.

B. We convert DWG & DGN files to plot & PDF files.

3. Standardization of Drawing.

4. Redline mark UPS update.

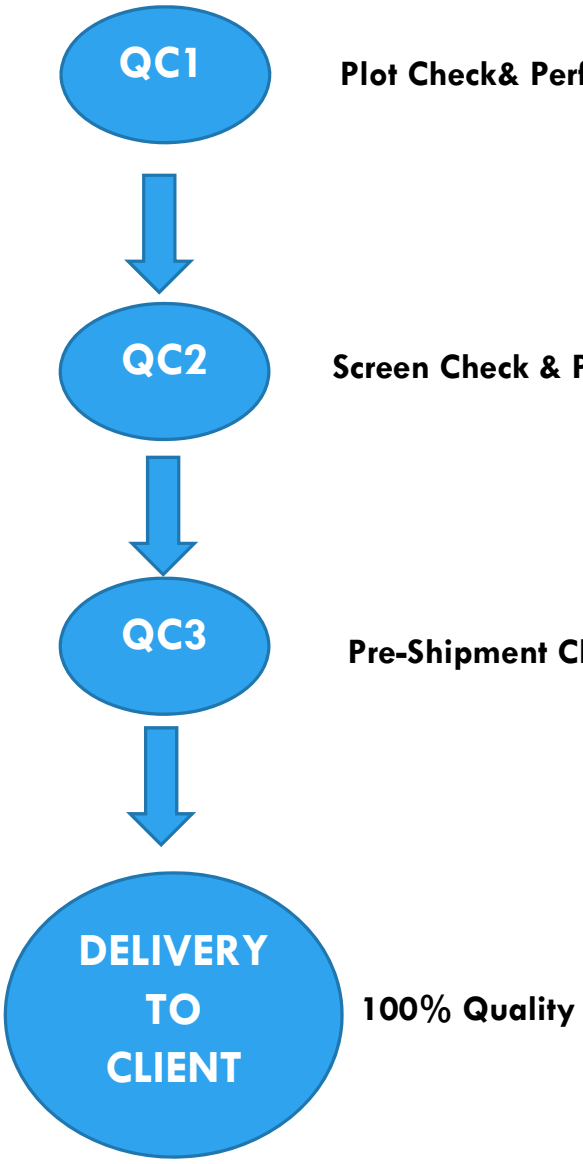
5. Design Hand Sketch to CAD conversion.

- **QUALITY CONTROL PROCESS:-**

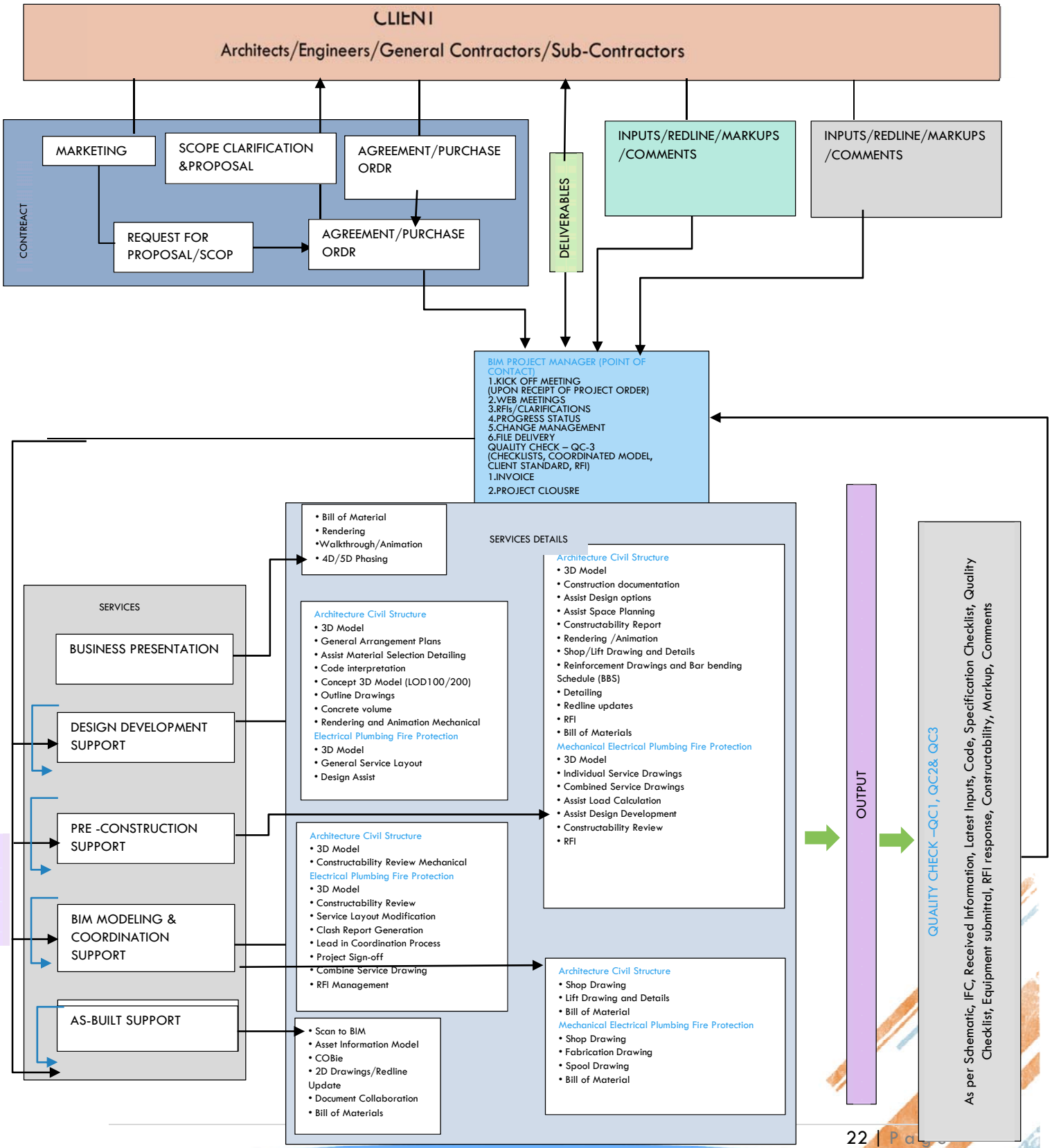
Our QC process is managed by an independent QC team. We have implemented the Environment Management System.

The main objective of the quality control (QC) process is to detect errors and rectify them. Ensuring quality is a group effort and our dedicated QC team is led by a highly qualified and experienced Manager in M&E Coordination and Quality Control.

The entire QC process is handled in three phases:



- **Work Process Flow Chart:-**



- **Why PASMEC?**

PASMEC is providing innovative BIM services. Our in-house team of more than 50+ experienced Architects, Engineers, and BIM professionals help us provide end-to-end solutions to discerning clients around the world.

Quality Output

Our Quality Control Team is led by employees who have more than 10 years of experience. Our process orientation & quality control is as per International standards. Our Pre-construction & Pre-fabrication reviews with RFI generation help clients make better use of manpower and improve the quality of construction, reducing rework and wastage. Detailed Material BOQ & Shop Drawings with 3D visualization enable a better look at "The Big Picture" and aid in the review, scheduling, and monitoring of each project.

Fast Turnaround

Our skilled team of professionals can provide quick turnarounds on complex projects. PASMEC has completed several large-scale projects across the world.

Less Expensive

Clients rely on us for our top-of-the-line services at reasonable rates. We help clients assemble projects in a virtual environment for identifying and correcting potential problems before construction. We offer a cutting-edge advantage in terms of Building Information Modeling services, facilitating project coordination, collaboration, asset management, risk mitigation, logistic planning, and cost optimization.

Technical Strengths

Our professionals use the latest BIM software: Autodesk Revit, AutoCAD Architecture, Navisworks, Inventor, AutoCAD Civil 3D, 3DS Max, Sketchup, SolidWorks, Autodesk Fabrication,V-Ray etc.... As we have a deep understanding of global and regional codes and standards.

Global Presence

PASMEC has offices in INDIA (Kolkata).

Communication

PASMECProject Management team is available to clients through several communication channels including:

1. Global telephone networks for instant communication.

2.Email (on Google server) for reports and interactions.

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