

# Construction BIM Services For Mechanical & Hydraulic System



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# About us

DESIGN AND DRAWING SOLUTION offers construction documents for Mechanical & Hydraulic systems. Our Mechanical & Hydraulic team is having good knowledge of Australia, New Zealand Mechanical & Hydraulic engineering designs & construction document process & codes and guidelines.

| Mechanical – AS1668.2 – 2012, AS 4254.2-2012

| Plumbing – AS3500, IPC

We are familiar with Australia, New Zealand standard practice and requirement of Mechanical & Hydraulic design for all type of buildings, Industrial warehouses & Infrastructure construction i.e. from Interior Fit outs, single family apartment, high rise apartment, commercial office buildings, hotels, restaurant, hospitals, School, College including infrastructure construction like Airport, metro stations etc.

We are providing our services worldwide and specially in Australia & New Zealand with Mechanical & Hydraulic consulting engineers & Contractors.

Using our BIM and 2D CAD outsourcing services, our clients have numerous advantages i.e. including time and cost savings which are realized during the design phase and more importantly, during the installation and build stages of construction projects. We are certified Autodesk users and started in Mumbai, India from early 2018 and having our representative in US as well as channel Partner.



**6+**  
Years' Experience

**300+**  
Completed Projects

**150+**  
Customer world wide

## Building Types includes

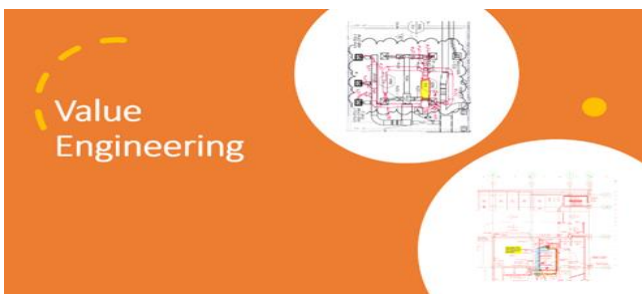
- Interior Fit out for Commercial / Residential
- Bungalows /Residential Apartments
- High Rise Residential building
- Commercial IT / Banks
- Hotels
- Institutional Buildings like school, Libraries, Auditoriums
- Hospital
- Entertainment Zones, Malls and Multiplexe
- Data Centre
- Industrial ware house

## Construction BIM Services

- Value Engineering
- 3D Modelling – LOD 400
- BIM Co-ordination
- Penetration, Sleeve Drawing
- Shop Drawing
- Spool, Hanger & Insert Drawing
- As Built Model & Drawing (LOD 500)

## CAD Services

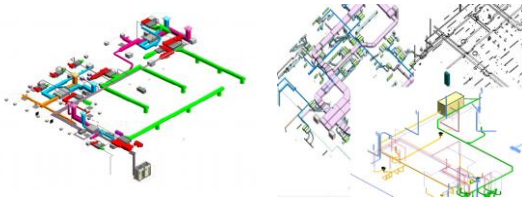
- Shop Drawing
- As Built



We do the value engineering for any project to produce construction document with internal engineering Team. We analyze the construction document with project specification and cross check all the MEP services drawing data like pipe size, duct size, cable & conduit size and all the routine which enables the Optimize the design with the cost is called a value engineering.

- Proposed re-rout with shortest distance for piping and ducting to reduce the material cost.
- Reduced the no of fitting and bends in the co-ordination.
- Optimization the design through constructability review.
- Reduce the duct size if require as per the specification and code.

3D Modelling  
LOD 400

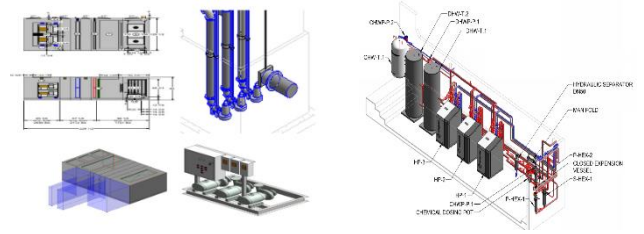


We are specializing in the virtual construction of 3D models @ LOD 400 of Mechanical, Plumbing & Electrical systems i.e. duct, pipe, conduit, tray with fitting including all valves & accessories with all associated equipment's and fixtures.

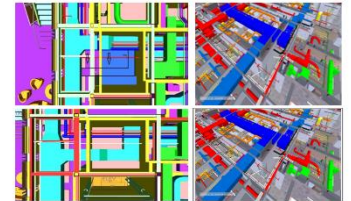
We produce 3D Models based on contract drawings, technical specifications, and manufacturer details to client standards.

## Equipment Modeling

From the manufacturer's 2D drawings and in line with MEP schedules, we create a 3D model of all the MEP equipment such as PUMPS, AHU, RTU, CU, FCU, VAV, pumps, chiller fans, DG, panels, etc.



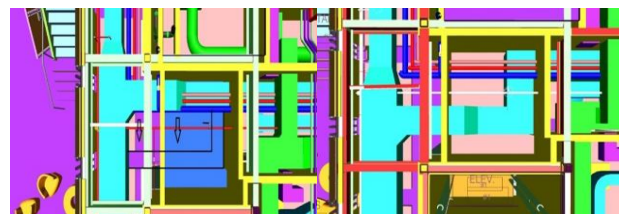
## BIM Co-ordination



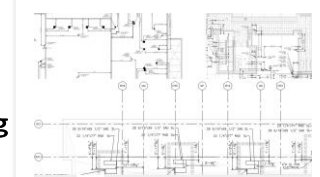
We generate a coordinated BIM model after resolving the clashes among all disciplines – Architectural, Structural, Concrete, Mechanical, Electrical, Hydraulic, Fire Protection, etc.

Clashes are resolved through video conference discussion with all stakeholders regarding the 3D clash snapshot and multiple fix options such as rerouting utilities, changing elevations, and resizing.

Value engineering is also utilized to improve system efficiency, reduce costs, and provide for more efficient construction and maintenance.

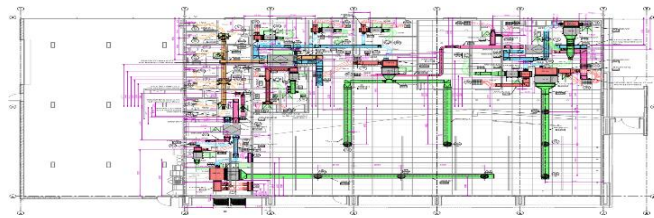


## Penetration , Sleeve Drawing



Penetration, Sleeve Drawings are required before a contractor can start pouring concrete on the site. Penetration Drawings are created from the

coordinated BIM model after alignment with the architectural grids. Our experienced team keeps the necessary clearances for the penetration as per the contract documents and Specification.

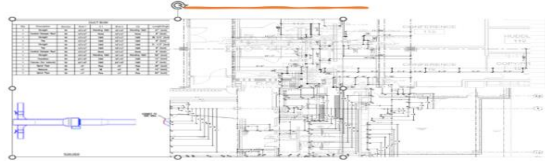


Shop Drawing

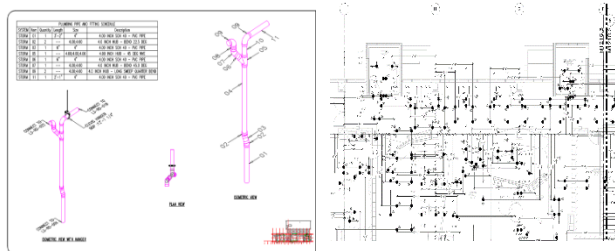
We produce Shop drawing after Co-ordination with utilizing coordinated BIM model or coordinated CAD drawings which are detailed enough for workshop fabrication and incorporated with sleeves and penetrations.

We provide the dimensions, BOD, COP & BOP, annotations inline with client standard & requirement as per standard practice.

### Spool ,Hanger & Insert Drawing

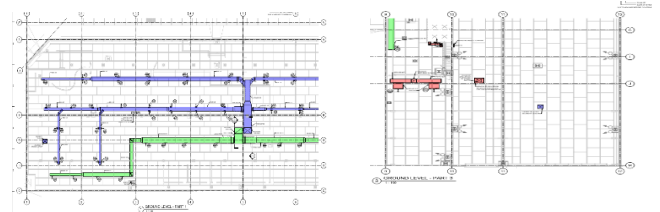


D & D produce the Spool drawings, Hanger & insert drawing with proper co-ordination of model and placing the hangers in line with specification. Hanger drawings shows the actual location of hangers with proper dimension from wall or grid. Insert are position of hangers insert points and D & D produce the proper insert drawing coordinating with actual hanger location in the model.



### As Built Model & Drawing (LOD – 500)

Based on the site mark-ups, we create as built 3D model & Drawing and prepare the as built set for project hand over and record.



CAD Shop Drawing & As built Drawing

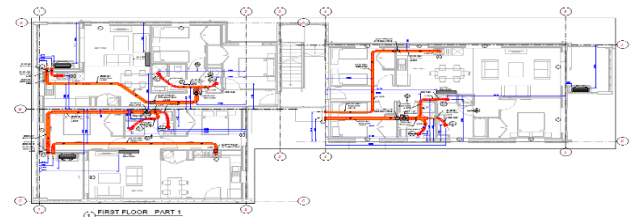


### Shop Drawing

Our cad team produce the shop drawing from CAD design drawing to incorporate the details of all fitting, accessories, details including as follows. Drawings shall be indicative of actual equipment purchased and shall show all offsets, transitions, fittings, dampers, valves, hanger locations.

**Co-ordination:** - Co-ordination with architectural, structural along with other services to fix the **BOP**, **BOD** with proper dimension and annotation.

**Dimension and Annotation:** - Providing proper dimensions and annotation inline with client standard or as per general standard shop drawing



### As built Drawing

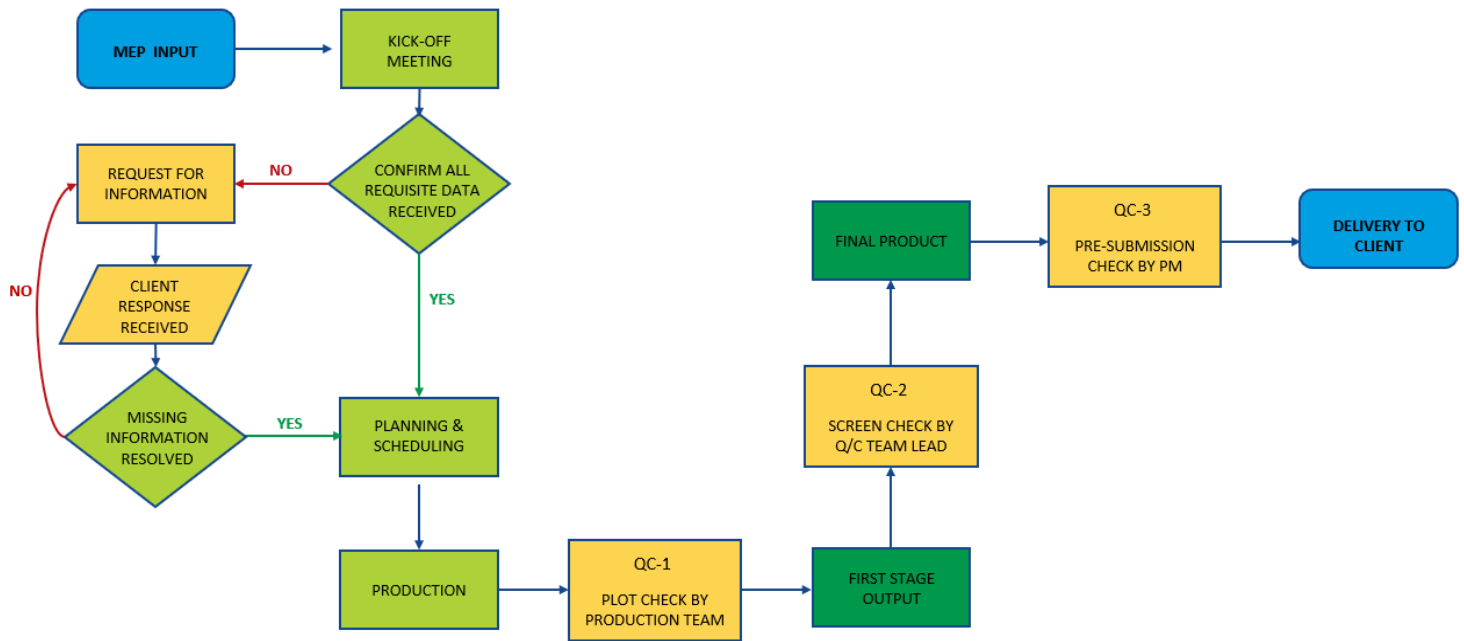
Our cad team draft the CAD drawing from redline mark-ups and Our As-built/Redline Markup Service is ideal for creating your as-builts drawings or design modifications in AutoCAD.

Markups:

RED ink for drawing changes



# Execution Process



We use to implement our standard BIM/CAD execution process to deliver each and every project.

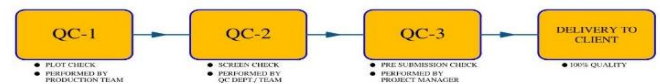
**Stage 1:** - We do kickoff meeting with our client for better understanding of the project to start.

**Stage2:** - We do project review, planning and prepare project specification checklist and delivery schedule and share with client.

**Stage3:** - We allocate our dedicated Team lead with team member inline with the services to start the production activities as per delivery schedule.

**Final Stage:** - We follow QC process in the execution process before delivered to the client. With the above process, we deliver the high-quality product to client.

D&D QUALITY CONTROL PROCESS



## Quality Check – 1

The model check is done comparing it with the original contract documents through Team Member.

## Quality Check – 2

Team performs a more detailed comparison with specific checklist and project checklist the deliverables and main objective check the following Clashes (Old/New), Elevation, Routing, Fittings, etc. Construction point of view.

## Quality Check – 3

The Project manager conducts the pre- shipment check before sending them to client.

# Core Team

## **Irshad Ali Shaikh** **CEO – Co-Founder**

Mr. Irshad Ali is the co-owner & founder of DESIGN AND DRAWING SOLUTION. He is having more than 15 years of experience in Building services in construction Industry throughout AEC project execution process from Pre-construction, construction processes like MEP engineering consulting, Designing, installation and handover process of the project.

He has completed BE in Mechanical Engineering from Pune University with Post Graduation in Project Management (PGPPM) from NICMAR Pune, India. In his small journey, he has successfully delivered the more than hundred BIM/CAD project for his satisfied client with the best quality and unique team effort.

He has experienced in all kinds of projects i.e., starting from Residential township, Commercial IT buildings and parks, Malls, High rise building, Hotel, Hospital & Institutional building. Including building Infrastructure projects like metro, airports, globally i.e. USA, Australia, New Zealand & India.

## **Karishma Bibi** **Sales Head**

She is the co-owner of DESIGN AND DRAWING SOLUTION and well experienced in offshore sales development initiatives. She is having a good knowledge of result-oriented sales development processes and customer retention. She is leading the complete sales team for B2B sales within the company and managing and monitoring the effectiveness of the entire sales cycle. She has implemented her interior design expertise to improve the technical expertise for client communication for offshore sales which helps her build a long-term relationship with new and existing clientele.


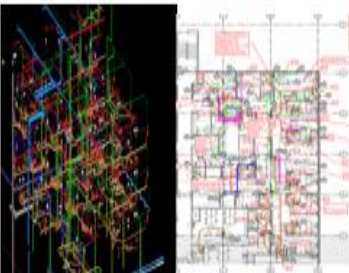
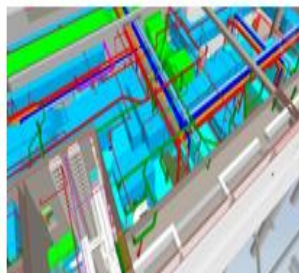
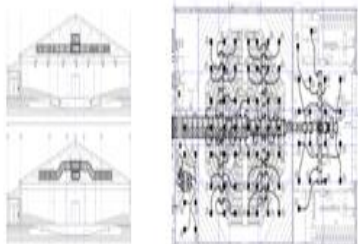
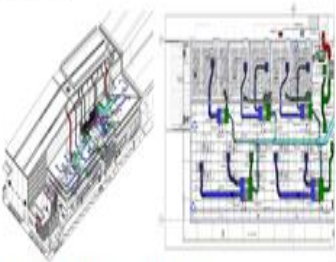
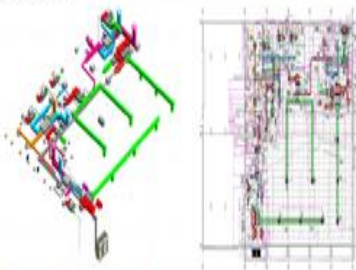
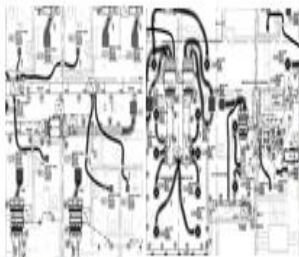

## **Rupam Mondal** **Production Manager**

He holds a Mechanical Engineering diploma from WBSCTE, India and having more than 7 years' experience in Building construction Industry for MEP engineering, Drafting, of 3D , 4D , 5D & 6D BIM service .

He is having expertise in MEP engineering calculation, with all Autodesk BIM/CAD tools like Revit , Fabrication, AutoCAD MEP ,Navis works and AutoCAD and has complete knowledge of engineering and drafting services for all stages ( Pre/post ) of construction process .

He is working in DESIGNING AND DRAWING SOLUTION since from starting period of the company. With a short period of time , He has gained the managing process of the company , client communication, project management process and assisting with innovative (R & D) solution of new process , tools for new requirement of clients.

## Project References

Mechanical & Plumbing System			
			
Rockfield Apartments Auckland New Zealand Apartment	Logan Hospital Queensland Australia Health care	Western Sydney Airport New South Wales Australia Air port	Geelong Gospel Trust Batesford Australia Auditorium
			
Giltrap Distribution Centre Auckland New Zealand Wirehouse	Lot 17 Mania Subdivision Christchurch New Zealand Office	Tricare Victoria Australia Health care	The Domain Collection Park & Garden Building Auckland New Zealand Building

## Contact US

