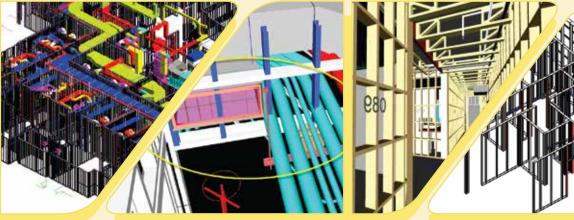




# 3D BIM Modeling & Shop Drawing Services for Drywall, Ceiling & Framing Contractors





- O 3D BIM MODELING
- O SHOP DRAWINGS
- O CLASH DETECTION & COORDINATION
- O BILL OF MATERIALS /QTO
- O CONSTRUCTABILITY REVIEW

pinnacleinfotech.com









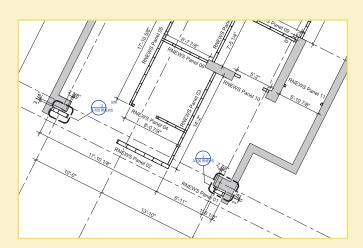


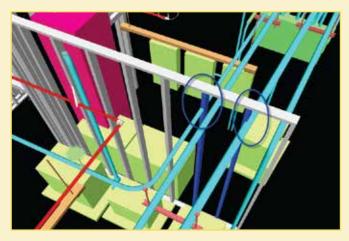


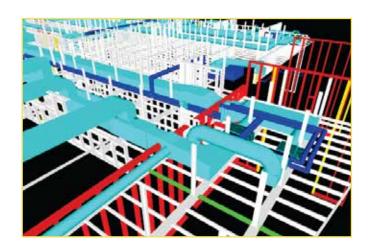
## COMMITMENT

We are committed to our core values and corporate mission:

- Maximizing client value by adopting the latest technologies and innovations.
- Improving project efficiency by streamlining workflow and providing high quality services.
- Saving time by using a large global team to leverage time zone advantages.
- Reducing client costs up to 15% by harnessing a highly experienced global work force.







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## Revolutionizing Drywall & Framing Segment of AEC Industry

Time and cost are the major key factors which has a great influence in all AEC Ventures. Be it any segment or any stakeholder of an AEC Project, major strive stays focused towards the cost and time management. BIM with its revolutionary standards and potential of facilitating the construction process has lots of privileges from Drywall and Framing Contractors.

Pinnacle Infotech with its long years of presence in the industry has helped the AEC professionals of all segments by accurate and task-oriented implementation of BIM. Pinnacle offers BIM services for drywall contractors modelling with constructability review, clash coordination, shop drawings, quantity take-off and virtual mock-ups. Our industry experts automate metal stud placement and eliminate the laborious process of manual placement of

metal studs. We are conversant with all prevalent international software applications like Autodesk Revit.

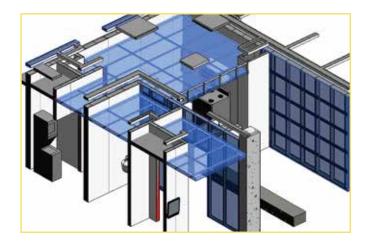
Pinnacle Infotech has been acknowledged as the global leader in providing innovative BIM solutions. Various awards and recognitions from corporate and government level certifies our experience and expertise in project management and service deliverance. Our process orientation & quality control is as per ISO 9001:2015, ISO/IEC 27001:2013, and Environment Management System (EMS) 14001:2015 certified. Serving the industry for more than 20 years in 40 countries with 5500+ projects, Pinnacle acquired deep understanding of international building codes and procedures. Our global delivery system allows us to maintain constant contact with our clients making geographical separation meaningless.



## Why BIM for Drywall, Ceiling & Framing Contractors?

A BIM add-on for interior framing lets building professionals look at a BIM object or wall type and quickly understand the wall's construction, fire and sound requirements, limiting heights and design.

Building information modeling is changing the way buildings are designed and constructed. It facilitates two-way collaboration and communication between architects and the trades, resolving details and potential conflicts before the concrete slab is poured. It also requires that you change your work processes. BIM is like a train hurtling down the tracks-you can stand aside and watch it pass or treat it as a ticket to new business opportunities.



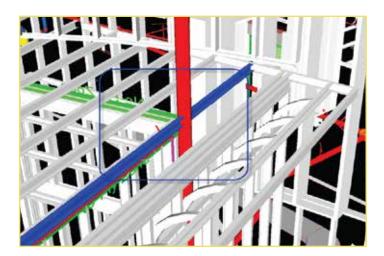


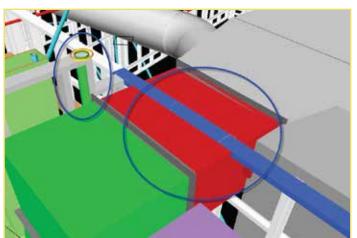


## BIM Services for Drywall, Ceiling & Framing Contractors

## 3D BIM Modelling with Constructability Review

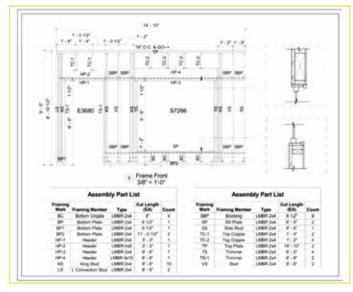
The basic aim of 3D BIM Modelling Constructability analysis is to review construction processes/methods during the design phase and identify potential obstacles and design flaws that might result in schedule delays, cost overruns, rework, etc.



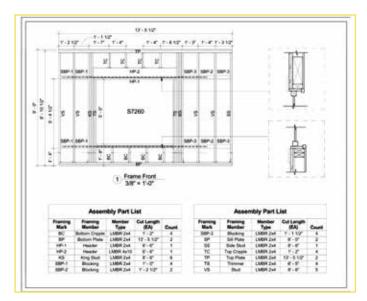


## 2D Shop Drawing

Shop drawings are typically a set of drawings required for prefabricated components and include dimensions, manufacturing standards and fabrication details. Architectural building information modeling (BIM) has its roots in conventional 2D shop drawing. Coordinated shop drawing is a combined 3D rendering of the construction project by integrating all architectural, structural and trades shop drawings. A drawing or a set of drawings, which are required for prefabricated components like trusses, elevators, structural steel, windows, cabinets, appliances, mill-work and air handling units and produced by the contractor, supplier, manufacturer, fabricator or sub-contractors, are called shop drawings.



Shop Drawing – Interior Wall Framing



Shop Drawing – Exterior Wall Framing



#### Clash Coordination

BIM Model is prepared in different dimensions to individually deal with the geographical representation of the model and to see how it will look when constructed. It is also to flesh out any faults in the design so that the project comes out accurate and as expected.

BIM coordinated and collaborated with architectural, structural and MEP engineering disciplines can streamline the design process, identify clashes and resolve them during the design stage. It has proved to provide many benefits to construction projects and hence is being used by more and more architects and engineers.

FP VS ARCH (L200 & L250)_21	O-7 : Street Level	s:2801.064, y:360.959, z:355.112	#21- 2018/3/14 11:57,02 FP pipes clashing with WALL
FP VS ARCH (L200 & L250)_22	G-2 : Street Level	s:1089.155, y:-148.677, z:318.344	#22- 2018/3/14 11:53.47 FP pipes closhing with WALL
FP V5 ARCH (1200 & 1250)_25	A-7 : Street Level	x:363,360, y:943,179, z:414,180	#25- 2018/3/14 09:44.05 FP clashing with wall
FP VS ARCH (L200 & L250)_26	M-8 : Street Level	s:2363.290, y:724.316, z:352.250	#26- 2018/3/14 09-57.15 FP pipes clashing with ceiling

Clash Coordination

#### **Coordination Drawings**

BIM Coordination Drawing Services by Pinnacle forms the backbone for most implementation in BIM related projects. While BIM Coordination Drawing Process includes Clash Detection reports, constructability reviews and virtual mock ups or personal coordinated meetings with construction professionals, it enhances the operability and purpose of BIM software to ensure that the project is not delayed or incurs unnecessary costs for the team and clients.

It ensures coordination drawing is done prior to installation to minimize design changes. It identifies constructability issues in the pre-design stages to avoid errors in design,



Coordinated Model of Stud Framing & Mechanical

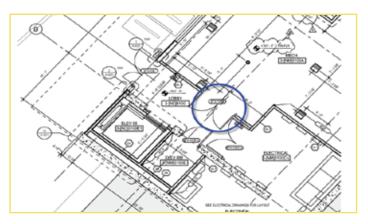
reduce clashes and improve coordination among architectural, structural and MEP disciplines. It aids in reducing wastage, conflicts, and installation issues. Design drawings are converted into virtual 3D Models for geometry representation where all the models are then created in Revit or Navisworks to detect errors, interference's or collisions, etc.

#### Design Validation or Design Assistance

When looking for Engineering design validation and Engineering design assistance services, Pinnacle delivers the highest quality services. Our expert team of design engineers will help you produce with higher quality 3D modeling, analysis & assistance. Design validation and assistance helps in uncovering the design flaws, performance risk and improves the overall product effectiveness. This feature reduces cost and time for construction and improves the constructability and adds value to the entire project management procedure.



Duct is clashing with wall stud (3D Model in Navis)



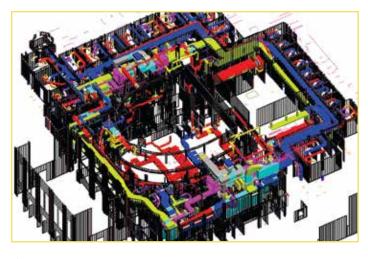
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## Drawings by Pinnacle to help contractors at coordination phase

- Color-coded members to differentiate priority walls, posts, opening framing & other members
- Dimensions relevant to framing placement
- Configuration of full-height walls at doors, handrails & corners
- Mechanical systems in conflict with walls
- Details of bracing rated lid & partial height walls to nearby walls
- Wall drawings with elevations, type identifiers & lateral dimensions for backing plates & openings



Wall Framing coordinated with Mechanical trade



Colour Coding for Critical Stud Elements

## Model based Quantity Take-off and Estimation

The feature of model-based quantity takeoff & estimation function of BIM holds the roots to significant automation and innovation in the building construction industry. Model-based quantity takeoff & estimation connects a 3D object, its parts and the entire assembly model to the external third party cost estimating software. Whenever a change in the design geometry or quantity is changed, the changes are automatically reflected in the cots.

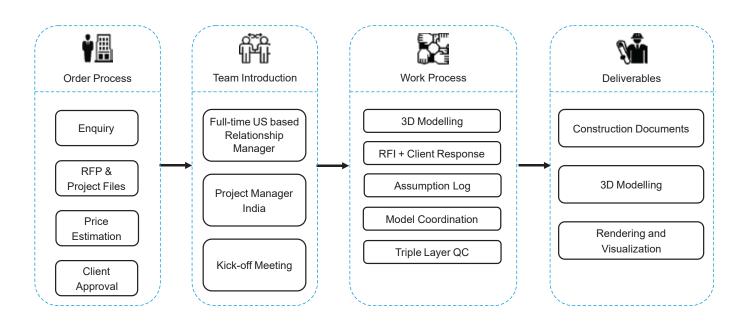
## Full services offered for Drywall, Ceiling & Framing Contractors

- Interior and exterior Metal and Wood Framed walls
- Interior ceilings, furrdowns, and exterior soffits
- Acoustical lay-in ceiling grids modeled in 3D for overhead MEP coordination
- Interior and exterior curtain wall and storefront
- King studs for MEP coordination
- Metal stud kickers above ceilings to aid in overhead coordination
- Shop drawings
- Metal stud wall blocking modeling and shop drawings
- Security ceilings, canopy and cloud ceilings

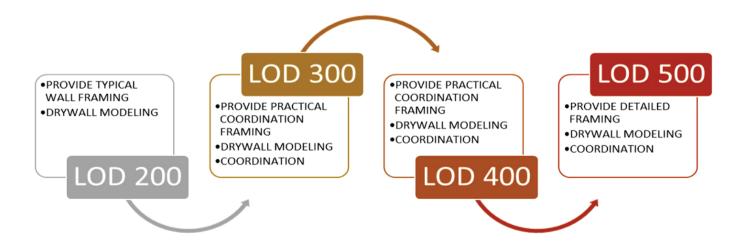




## BIM for Drywall, Ceiling & Framing contractors: Workflow



## LOD Matrix for 3D Model (Drywall, Ceiling & Framing Contractor)



## **Quality Control Process**

Our QC process is ISO 9001:2015 certified and managed by an independent QC team. We have implemented Environment Management Systems (EMS) 14001:2015. The main objective of the quality control (QC) process is to detect errors and rectify it. 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.

QC process for providing BIM services to Drywall and Framing contractors are divided into two phases. The first quality check is done by the modeller after completing the 3D Modelling. The final quality check is done before giving the final delivery.





#### Client's Feedback



"Pinnacle has been a great company to work with and they have helped me to create a functional model that aids in coordination efforts."



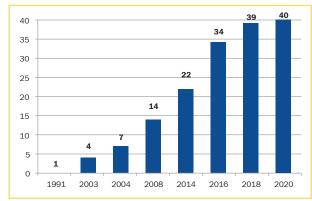
"For the first time working with Pinnacle on a very complex project it as went really good."

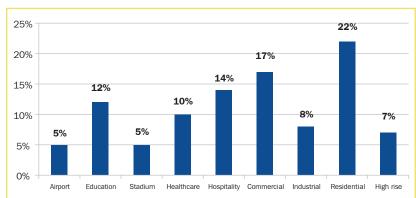


"Pinnacle has produced very detailed modelling in a timely manner that was faster than expected. They have also asked the right questions in order to provide a high quality product that we at Columbia can use to our full advantage."

## Why Pinnacle?

Pinnacle is a global leader in providing innovative BIM services. Our in-house team of more than 1250+ experienced Architects, Engineers and BIM professionals helps us provide end-to-end solutions to discerning clients around the world. Our multi locational and state-of-the-art infrastructure comprises of world-class production facility which is equipped with high-end workstations, advanced servers with real time backup and a high speed data and voice network.





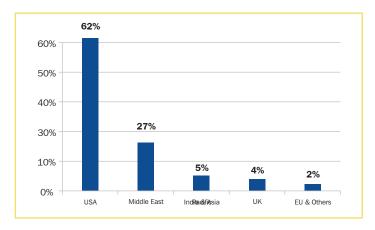
Country Wise Evolution

Project Statistics – Industry Verticals

## Global Leader in Industry

- More than 20 years of global experience
- Handled around 1150+ international clients
- Completed 5500+ projects of different verticals

(Hospitals, stadiums, universities, dams, apartment, complexes, hotels, casinos, large retail centre, high school, airport, commercial buildings, convention centre, high rise towers, and industrial projects)



Project Locations



#### **Best in Industry**

- Pre-construction & Pre-fabrication Reviews
- Effective RFI generation for efficient construction

- Detailed Bill of Material
- Shop Drawings with 3D Modelling

#### ISO Certified Technical Standards

#### **USING THE RIGHT TOOLS**

The following are BIM and Design Assist tools used during the delivery process:

Auto Cad Architecture, Autodesk Revit with Strucoft" MWF" Metal Wood Framer, AGA CAD, Revit (Full BIM - Preferred choice), Auto Cad Civil Design 3D Plant Design Suite, Pro/Engineering, SysQue, All plan, Adobe photo Shop, Adobe Illustrator, Adobe After Effects, 3DS Max, Tekla Structure, Solid works, AutoDesk Fabrication Suite, SketchUp

#### **Global Presence**

Pinnacle has offices around the world (SINGAPORE, JAPAN, USA, UK, UAE, ITALY, GERMANY, INDIA - Durgapur, Kolkata, Jaipur & Madurai) enabling us to serve our clients around the clock.

#### Robust Communication Systems

Pinnacle's Project Management team is available to clients through a number of communication channels including:

- Global telephone networks for instant communication
- Amazon Web Service (S3) for file transfers
- Email (on Google server) for reports and interactions
- Video and teleconferencing for presentations and conversations
- Web conferences with US based phone systems
- BIM collaboration through BIM 360, Revizto, Bluebeam Studio etc.

#### Awards & Recognitions

CRISIL Award, Autodesk, INFOCOM, NDTV, Deloitte, STPI, ISO 9001:2015 & ISO 14001:2015

#### **Quality Assurance**

ISO 9001:2015, ISO/IEC 27001:2013, and Environment Management System (EMS) 14001:2015 certified







- Newforma project information management system
- Engagement of US based Relationship Managers









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