

The Connected Construction Professional Series: Construction BIM/Detailing Professionals

How Connected Construction Helps BIM/Detailing Professionals Move Projects From Design to Construction

We've all seen young children create entire worlds out of a box of crayons and a piece of paper. With just a few materials they turn their imaginations into a visual reality, sketching out the world they dream around them. While adults may use tools a bit more complex than crayons and paper, we engage in a very similar task; turning imagination into reality. In the construction world, we call these people Building Information Modeling (BIM) or design/detailing professionals.

This installment of the Connected Construction Professional Series takes a closer look at the artists and art critics of the industry, the men and women who turn drawings into actionable construction guidelines. They make it possible to move projects from design to fabrication and from fabrication to construction. Without them, construction plans never move past the crayon drawing stage.

The Role of Construction BIM/Detailing Professionals



Construction Detailers Inspecting Construction Drawings

On site construction workers, project managers, and foreman are all well known roles in the construction world, but who exactly are BIM and design/detailing professionals, and what is their role? In short, they work with the architectural drawings, which represent the dreams of the owner, and transform them into actionable plans to be used during fabrication and construction. Without these professionals within a VDC department, drawings remain simplistic shells of how the project could appear in its final form.

While the terms BIM and detailing are overlapping, there is a slight difference between their meaning. Detailing refers to the process of transforming a MEP design into a detailed 3D model that is constructible and coordinated with other trades, analyzing specifications and drawings, communicating with clients and project managers, and ensuring adherence to client budgets and requirements. To create their models, detailers are responsible to read and interpret construction drawings to prepare accurate, detailed and compliant shop drawings for MEP preconstruction.

BIM stands for Building Information Modeling, and allows architects, civil engineers, manufacturers, contractors, and other construction professionals to collaborate within a 3D model of the building project. Such models are used to generate detailed drawings, material lists and fabrication files that allow shop and field stakeholders to fabricate and install MEP systems. While detailing is a norm in the construction industry, BIM detailing is a relatively new practice. As construction technology has advanced, more and more detailers are beginning to use BIM technology in their work.



Construction workers view construction drawings on a table.

BIM and detailing professionals, as their title suggests, must be capable of working with large amounts of small details. This requires high levels of organization, communication skills, problem solving capabilities, and some capacity for analytical critique. They are the fact checkers of the construction industry. For example, a BIM detailer is often tasked with searching for discrepancies between each subcontractor's original model. The plumbing, electrical, and mechanical models are useless if they don't align perfectly with each other, and it's the BIM detailer's job to make sure that they do.

This clash detection is an important part of a BIM detailer's role, and communication with each subcontractor is just as important. In this way, BIM detailers act not only in support of engineers and subcontractors, but also as liaisons between other sectors of the construction project. For example, both the fabrication and material acquiring process rely heavily upon detailers. Pipes and fittings, wire sizes, and steel beam specifications all need to be passed through a detailer's hands before materials can be purchased and construction can begin.

In support of each stakeholder, BIM/Detailing professionals also need to be able to produce detailed and actionable construction documents. If not communicated clearly and on time, all the specifications and quality checks on models become useless to subcontractors and project managers. The last thing a general foreman wants to find is that he has 300 yards of 1-inch conduit when what he needed was 300 yards of 2-inch conduit. Miscommunication, excessive need for RFIs, re-work and project delays make everyone involved look bad and cut into what is too often an already slim profit margin, making the work and communication of BIM/detailers extremely important.

Clearly, BIM/Detailing professionals play an important role in both the preconstruction and the construction processes. They enable everyone else to be successful in their role without having to second guess every action, because they know that someone else has already made sure all the plans align, ensuring the project's success.

What Construction BIM/Detailing Professionals Want and Need



A desktop showing construction plans.

BIM/Detailing professionals are skilled in the organization and communication of small details, but despite their skill, the sheer amount of details makes the job a difficult one. This is why

BIM/Detailing professionals are constantly looking for tools to help them organize information, disseminate data, automate processes, and reduce errors.

Imagine a situation in which plans have to change. Whether due to unexpected circumstances on site, or a client decision, detailers must be prepared to shift gears, update models, and communicate the changes to the appropriate stakeholders. Updates in fabrication, materials, and the order of operations need to be communicated quickly and accurately. This is why BIM/Detailing professionals are looking for ways to communicate more efficiently between the office and the field, as well as give stakeholders more visibility into models as they are being built.

Siloed data in the form of isolated models, drawings, revisions, and specifications documents create more room for errors and miscommunication. BIM/Detailing Professionals are looking for ways to share designs and documents easier and increase connectivity and visibility across workflows and teams. This kind of collaboration could reduce rework both in the office and in the field, saving both BIM/Detailers and field managers precious time.

In addition to better methods of communication, BIM/Detailing Professionals are looking for tools to make the detailing process faster and more accurate. They need accurate and up-to-date information on materials and manufacturer products. Without these in depth, real-world specifications, detailing becomes guesswork and prone to more mistakes.

BIM/Detailing professionals want and need tools that integrate accurate specifications within the models and drawings, and allow for connected workflows and communication. Such tools help connect the entire building process, from architecture to construction while improving efficiency and accuracy.

Why a Connected Construction Suite Like Trimble Construction One™ Is Your Answer



A construction detailer smiles as they work from the office.

Coloring pages and crayon boxes are great tools to start with, but if you are looking to up your game as a construction BIM/Detailing professional, there are tools designed specifically to help you succeed in your profession.

Trimble Construction One is a connected construction suite built specifically to meet the needs of construction professionals from the planning stages all the way through the building process. It provides project stakeholders with a tool kit of best of breed solutions, increasing their job proficiency, and all within an overall connected construction environment that allows whole teams to operate from a single data set. By breaking down cumbersome barriers between workflows, automating tasks, and providing you with all the tools you need, Trimble Construction One enables faster, more accurate, and more profitable building. With fewer construction delays, you can spend more time doing what you do best.

With Trimble Construction One, you have access to tools that enable you to stay on top of RFIs and communicate clearly between the field and the office. No more tension between the office and subcontractors who can't get a hold of up to date information from BIM/Detailing professionals. Now answers can be given in real time. Trimble Construction One also gives you access to a continually evolving database of over eight million parts, which can easily be integrated with your drawings.

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[Check Out Our Ebook On How Trimble Construction One Can Help You](#)

When using the VDC PRO+ Solution within Trimble Construction One, BIM/Detailing Professionals have access to a wealth of important benefits:

- **Design & Detailing:** Design constructible models in Revit and Autodesk AutoCAD.

- **Managed RFA Content:** Access a library of real world, manufacturer-specific MEP content for Revit.
- **Mechanical ITM Content:** Leverage the world's largest managed ITM content and system configurations to drive consistency and quality in your workflows.
- **Collaboration –** Share detailed data such as estimates, drawings, models, and more.

Take advantage of a connected construction suite like Trimble Construction One, and help more people turn their imaginations into a reality.

Want to learn more? [Connect with Trimble Viewpoint](#) today for your own personal tour of how Trimble Construction One could reshape your construction organization.

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