

Member Communication Experience

Collaboration and Interoperability Are the Future of Preconstruction

Written by: Jon Holmes, Content Marketing Specialist, Autodesk

“Fail to plan, and you plan to fail,” as the saying goes. This adage is especially true in the construction industry, where every bit of steel, lumber, and labor must be accounted for to avoid wasted time and resources, and a blown budget. In a business where building owner needs are nuanced, materials are expensive, and sustainability requirements are strict, architects, engineers, construction managers, and general contractors can’t afford to wing it. The stakes are too high.

Luckily, there’s a shift happening in the industry. There’s a reason why architecture and construction firms are focusing on and investing in the process that happens before a project breaks ground. The success or failure of a project can now often be traced back to its earliest stages: the preconstruction phase.

This growing realization is driving preconstruction enhancements into the spotlight. But what does the future hold? Can more collaborative, efficient, and thorough planning help overcome the built environment’s biggest challenges?

WHAT IS PRECONSTRUCTION?

Preconstruction is the critical bridge between design and construction, where vision becomes reality. After the design phase wraps up but before crews break ground, teams work through the complexities of turning architectural concepts into fully constructible plans. This phase is crucial to a project’s success, influencing everything from budget accuracy to timeline efficiency.



Architects define the design intent, creating construction documents illustrating how the building should look and function. From there, general contractors translate those plans into actionable models and workflows that the project team utilizes to execute on the jobsite. But preconstruction isn’t just about estimating costs, procuring materials, and assembling a building team – it’s about refining concepts, mitigating risks, and ensuring that what’s designed can be built efficiently and successfully.

“Preconstruction is defined as the planning phase of a construction project, including design, budgeting, and organization. But honestly, it feels more like the phase where you engage your team, your relationships, and build trust, to implement a successful construction project across your

owner, architect, contractor, and subcontractors,” says Sue Bhattacharjee, Norcal Director of Preconstruction at Gilbane Building Company.

“Sometimes, the players change from precon to construction, but the basic setup of the project, demeanor of the team, and the behavior of the OAC [owner-architect-contractor] and how it functions sets the precedent for a long-term good – or bad – relationship.”

WHY IS PRECONSTRUCTION IMPORTANT?

While preconstruction happens behind the scenes, its impact is front and center. Preconstruction is more than just planning – it’s where projects are won or lost and where margins are made or eroded. This phase sets the foundation for success, allowing general contractors to mitigate risk, structure the bidding process, engage trade partners, and establish schedules that keep execution on track.

For both clients and construction managers, a strong preconstruction process brings undeniable benefits, including:

- » Reducing risk by identifying issues and unknowns early
- » Providing clarity on project scope, execution strategy, and deliverables
- » Defining realistic timelines, ensuring more accurate scheduling and planning
- » Identifying cost-saving opportunities that add value without compromising quality

By evaluating every scenario upfront, preconstruction fosters confidence between clients and contractors. Clear expectations reduce surprises, streamline execution, and ultimately lead to a smoother, more successful project.

PRECONSTRUCTION IN THE PRESENT

A well-structured preconstruction phase lays the groundwork for successful project outcomes, addressing critical details before construction begins. This stage starts with an initial meeting, also known as a preconstruction meeting, to align on project goals, followed by in-depth planning that refines the design, estimates costs, and explores value engineering opportunities to optimize the budget. Managing project scope, identifying potential risks, and outlining contingency plans for the client and contractor help mitigate surprises down the line.

Site feasibility studies and environmental considerations are also key factors during preconstruction. Teams assess soil conditions, evaluate existing utilities, and determine necessary equipment while exploring sustainable building options and lifecycle costs. By addressing these elements early, teams can ensure a smoother, more efficient build, reducing the risk of schedule and cost overruns.

“For the longest time, preconstruction happened under different names – a business development-savvy project executive, a verbose estimator, or an aggressive PM (project manager) who keeps getting repeat work from the same client,” says Bhattacharjee. “In the past 10 years, preconstruction as a role has become more prominent. It is recognized as a breed of estimators or PXs (project executive) who not only know the numbers but can explain the numbers and influence design in an impactful manner.”

Bhattacharjee says that, as this function has gained more recognition, so has innovation in the field. “With the rise of integrated project delivery-style contracts and design-build projects across all of America among different sectors, the way we communicate the estimate, design decisions, schedule, and project budget trends to our clients is undergoing massive changes,” she explains. “From simple Excel spreadsheets or a complicated P6 schedule to more visual dashboards, innovation is happening in every possible way.”

Preconstruction is where projects come to life – digitally – before any physical work begins. With estimating, designing, and revisions happening in tandem, rigid phases give way to a more fluid, collaborative approach. The right digital tools and connected workflows are essential, ensuring teams can refine plans in real-time and align on scope early.

Seamless collaboration in the digital space leads to stronger project outcomes. More accurate estimates mean fewer budget surprises, contractors and trades can bid and schedule with confidence, and changes become easier to implement.

CHALLENGES IN THE PRECONSTRUCTION PHASE

Preconstruction is evolving rapidly, but the challenges teams face today are increasingly complex. One of the biggest hurdles is fragmented communication. When stakeholders, from owners to trade partners, work in silos, misalignment can lead to costly rework, scope creep, and budget overruns before construction

begins. Without a centralized platform for collaboration, critical details can get lost in the shuffle, creating inefficiencies that ripple throughout the project lifecycle.


Another pressing issue is tightening budgets and unpredictable costs. With material prices and inflation fluctuating and labor shortages driving up expenses, contractors must navigate an increasingly volatile market. Accurate cost estimation is crucial, yet many teams still rely on outdated methods that leave too much room for error. Without data-driven forecasting and real-time cost tracking, firms risk underestimating expenses or overpromising on bids.

The growing demand for sustainable and high-performance buildings adds another layer of complexity. Clients want energy-efficient, environmentally responsible designs, but integrating green building strategies into preconstruction requires careful planning, early decision-making, and a clear understanding of long-term costs. Without the right tools and expertise, balancing sustainability with budget constraints can be a significant challenge.

To address these challenges and stay competitive, firms must embrace digital solutions, leverage connected workflows, and prioritize collaboration from day one.

Bhattacharjee sees potential for digital solutions to address the two main challenges she currently sees in the process. First is communication. “Communication is always a challenge in preconstruction,” she says. “What I say and what you hear are two different things. I am hoping with the advent of new precon dashboard-type software in the market, this challenge can be overcome as we get smarter at showing the information and the clients get better insight into interpreting the information. It’s important we help our clients make the right decision by providing them with the information they care about. The transparency using these dashboards will help both parties improve their understanding and ask the right questions to help make informed decisions.”

The second challenge she sees is the need for digital solutions to address a lack of data standards across construction firms. “I am hoping AI is able to sift through all of our data at each of our firms, and help categorize it in a consistent manner to a data standard that we as a construction consortium can create and use,” Bhattacharjee says. “But, right now, every firm struggles to ensure that they have a database where

the scopes within an estimate are categorized correctly. I am hoping just like UniFormat and MasterFormat were created, there are more stringent standards so we can really analyze data across firms, so the same client is comfortable using different GCs and still has the right understanding of the scopes and budget if all of us have the same definitions.” 



About the Author

Jon Holmes is a content marketing specialist at Autodesk, focusing on SEO and owned media. Based in Metro Detroit, he is a copywriter by trade. Before joining Autodesk, Holmes drove engagement and conversions for digital mortgage companies, AI start-ups, SAAS manufacturing apps, and more.

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