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## **Preconstruction services and the role of a construction manager so project moves smoothly**

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Construction projects are not cookie-cutter affairs where one plan fits all. It's easy to assume that because a construction manager (CM) does this for a living, any and all issues should be immediately and easily solved. But each new project brings fresh challenges and nuances. That's why it's critical to bring your CM into the preconstruction process as early as possible - allowing your entire project team to work together from the beginning to ensure issues are discussed and addressed well before a shovel hits the ground.

### **Elements of Preconstruction**

When done correctly, preconstruction planning is a thoroughly collaborative process that includes the CM, architect, owner, and engineers/consultants. Each discipline has its own unique set of skills and perspectives to bring to the table. Below are some of the many services and skills that a CM can provide during preconstruction.

**\*Feasibility and Constructability** - Working independently or collaborating with the architect and consultants, a CM will usually begin the preconstruction process by developing feasibility studies and constructability analyses based on the project scope, program requirements, site constraints, and available budget. The depth and importance of these activities varies as the project evolves. The CM will review, discuss, and make recommendations regarding the systems, materials, details, and components being considered for the project.

**\*Communication** - A successful preconstruction planning process is all about communication - keeping all team members informed as choices are considered and decisions are made. During planning, the CM will prepare a decision-making framework of systems and materials, preliminary construction budgets, and cost models to assist the project team in the development and finalization of design. During schematic and design development, there are regular meetings with the architect and consultants to advise on site use and improvements; selection of materials, building systems and equipment; construction feasibility; availability of labor and materials; adherence to the budget; and construction time requirements.

**\*Value Engineering** - Achieving the desired goals through the most economical means is the objective of most construction projects. Value engineering is an insightful, creative exercise, not one that merely sets out to reduce scope or costs. A skilled CM is a partner in the process and proactively identifies areas where money is being spent unwisely, searches for alternates, and recommends materials and methods that are cost-effective yet maintain the integrity of the design intent. The owner then decides which ideas to incorporate into the project.

**\*Budget** - Understanding and proactively dealing with budget constraints is critical for success. CMs crunch the numbers to determine the estimated project cost based on all information gathered to date. A CM must look forward and anticipate any and all reasonable, foreseeable costs that will be

incurred during the course of construction. If necessary, modifications may be incorporated very early in the process without adding exorbitant costs or design time. Milestone budget updates are done when schematic and design development documents are issued. Subsequent budgets are tracked against the initial budget so that changes to the original estimate are reviewed and understood by all.

\*Schedule - Many projects have firm deadlines with significant implications if they are missed. The CM is responsible for developing a master project schedule that is used as a tool for planning and monitoring the progress of the preconstruction and construction process. It coordinates and integrates items such as the architect's design process, permitting time frames, various budget reviews, and owner action items with the construction schedule. Requirements for phased construction or site restrictions are addressed and incorporated into the schedule. Critical dates are established, including dates for procurement of long lead items and critical elements of work such as subcontract awards, shop drawings, sample preparation and submission, fabrication time, field assembly, and installation.

\*Site Assessment and Logistics - CMs perform site assessments of existing conditions and establish a construction site mobilization plan. These plans incorporate procedures for truck traffic and delivery schedules that minimize disturbance to adjacent neighborhoods. If the project is within an occupied facility, it's critical to fully understand the client's usage of the space and incorporate that knowledge into the plans. The primary objective is always to provide a safe site with the least disruption possible during construction.

Construction projects are such costly and sensitive endeavors that it makes sense to have the team member responsible for actual construction involved from the beginning. When an experienced and attentive construction manager is involved in a project during the early planning stages, the risk of having budget, schedule, quality, safety, permitting, or logistical issues is greatly reduced.

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