CLARKITECTURE
BUILDINGS THAT MEAN BUSINESS.

HOW DOES THE CONSTRUCTION PROCESS WORK?

Most construction projects are described in three main steps (*design-bid-build*). We add two steps (*plan* and *occupy*) to encompass the full project timeline. Because every construction project is unique and yours may not fit precisely into these steps, they are fluid. We're here to walk you through the process (whatever it may look like), until your project is successfully completed.

> Note: industry jargon that you are likely to hear often is included in italics. Throw around these terms to impress your friends!

Plan. This step begins with your first inkling to undertake a construction project. It may be years in the making. Most likely, no professionals (architects, engineers or construction) are involved yet. There may be few documented decisions, but the formwork of the project is molded in this early stage of the project timeline.

Design. This step formally begins when you hire us (the architect). Depending on the size and complexity of the project, it may take a few weeks or more than a year to complete the design. We interpret your ideas (from the *Plan* phase) into a documented *building program*, which informs and influences the rest of the design process. We also lead a team of engineers and other specialized consultants to develop the building program into a fully resolved building. Ultimately, the building is documented with construction drawings and specifications. Together, these are the *construction documents* (CDs). The CDs are submitted to the builder/general contractor (GC), who uses the CDs as instructions for building the project. The CDs are also submitted to the *local building authority* (LBA) for plan review. The plan review generally takes three to four weeks, depending on the municipality. The LBA may request changes (*revisions*) to the CDs. Once the CDs have been revised, a *building permit* is issued for construction.

> The architect's role in the *Design* phase is often described as five sequential services: *Pre-Design*, *Schematic Design* (SD), *Design Development* (DD), *Construction Documentation* (CD) and *Construction Administration* (CA).

Bid. This step may take place at almost any time during the *Design* phase. It may involve one or several builders/general contractors (GC). The more complete the *construction documents* (CDs) are, the more accurate the GC's bid will be. If a GC bids a project using preliminary CDs or schematic drawings, he or she may provide a *guaranteed maximum price* (GMP), which is a conservative estimate for the maximum cost of the work, and the construction work will be billed for actual cost (based on materials and labor). A GC who is selected early in the *Design*

phase may assume the role of a *construction manager* (CM) or *construction manager-at-risk* (CMAR) for an additional fee, which means he or she assists you and the architect with periodic cost estimating, helps to optimize the project based on cost and constructability and may help avoid construction errors. Bidding a project may take a few days or a few weeks, depending on the size and complexity of the construction.

Build. This step most often begins after the *construction documents* (CDs) are completed, a *building permit* has been issued for construction, and a builder/general contractor (GC) has been selected. However, a f*ast-track delivery method* may allow construction to begin with partially completed CDs and a *conditional building permit*. In most municipalities, dirt moving (*earthwork*) does not require a building permit and may begin at any time. This delivery method usually requires the services of a *construction manager* (CM) or *construction manager-at-risk* (CMAR) to coordinate the piecemeal construction. The length of the *Build* phase depends on the size and complexity of the project; the GC/CM/CMAR's size and capability; the construction budget; and even the anticipated weather.

The architect's role during the Build phase is described as *construction administration* (CA). We represent your interests on the jobsite; observe the construction to ensure that it is completed in accordance with the CDs; review *submittals* and *shop drawings* from the GC, subcontractors, product manufacturers and suppliers; review *applications for payment* from the GC; and

answer questions and resolves coordination issues for the GC. The latter is very important; despite every effort to predict all potential problems, construction projects are very complex and there are always unforeseen conditions that are encountered in the field. We plan to encounter at least one major crisis during every construction project and encourage you and the GC to share that expectation.

Occupy. This step (the home stretch) overlaps the end of the *Build* phase. As part of the architect's *construction administration* (CA) services, we conduct a final walkthrough when the construction approaches completion (*substantial completion*) and document all defects and incomplete work (the *punch list*). When the builder/general contractor (GC) corrects and completes all items on the punch list, the construction has reached *final completion*. Similarly, when the construction is complete enough to be considered safe and functional, the *local building authority* (LBA) may issue an *occupancy permit* for all or part of the building. The occupancy permit allows you to move people, equipment and furniture into the building and occupy it for its intended use. Starting on the day you take occupancy, most GCs (and some state laws) include a one-year general warranty on all aspects of the construction. Specific parts and systems may include longer warranties from the subcontractor, supplier or manufacturer. Furthermore, the architect may provide *commissioning* services to ensure that various building systems (mechanical, electrical and otherwise) are functioning effectively and efficiently.

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