

All contractors face professional liability exposure due to the services they provide. For some, professional services may include actual engineering, inherent construction management or field modifications to plans and specifications. For others, it is simply inherent construction management or field modifications. What determines the extent of exposure is the type of contract and project delivery method under which the contractor is engaged and the services they are contracted to perform. This professional liability risk profile describes the Design / Build project delivery method and presents potential professional risks associated with this delivery method.

DEFINING CHARACTERISTICS

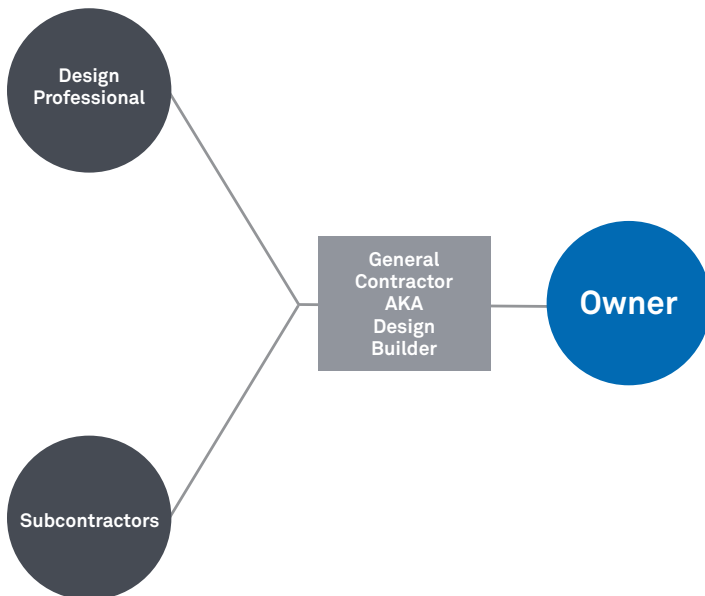
In Design / Build, the Owner of a project contracts with a single entity, the Design Builder. The Design Builder accepts total responsibility and control over designing and constructing a project. The Owner holds the Design Builder responsible for all aspects of design and construction. The Design Build entity can take several configurations. The Design Builder can be:

1. An integrated firm that has in-house architects, engineers and construction professionals.
2. A joint venture created for just one project and for a set duration where a design firm and a construction firm team up to complete the project under one contract with the Owner.
3. A design firm who then contracts with a construction firm to build the project.
4. A construction firm, who then subcontracts with the design team of architects and engineers.

The construction firm hiring the design professionals is the most common configuration although, it is not uncommon to see designer-led design build systems.

Design / Bid / Build projects with separate contracts for design and construction will be built with 100% completed plans and specifications. However, a Design / Build project begins with less than 100% completed design plans and specifications. Some construction phases might begin with only 30% or 50% completed plans and specifications. Because of the faster pace of the Design / Build project, communication between the design and construction personnel is essential.

A major advantage of Design / Build projects is the savings in time and cost to the Owner. Additionally, the Owner only has to manage one contract with the Design Builder.



CONTACT

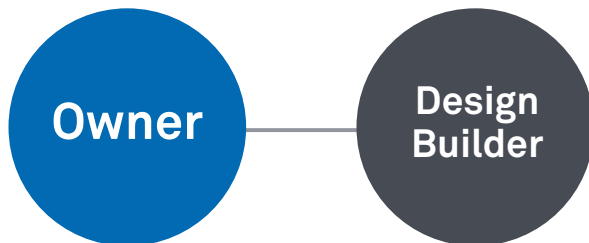
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However, professional liability exposure for the General Contractor (GC) is significantly higher than on a Design / Bid / Build project. Unlike Design / Bid / Build projects with a separate contract between the Owner and the GC who does no design, the Design Builder can have primary or vicarious design responsibility. If the Design Builder is a design firm who subcontracts with a construction firm, then the design exposure is primary. If the Design Builder is a construction firm who subcontracts with design professionals, then the professional liability exposure is vicarious. This greatly exposes the Design Builder to professional liability claims resulting from the economic damages caused by design errors and omissions.

POTENTIAL PROFESSIONAL LIABILITY EXPOSURES

DESIGN SERVICES

Responsibility for design services may exist at various levels and change for certain structural components. For example, there may be direct liability from the use of in-house architects, engineers, or other design professionals or vicarious design liability could exist due to subcontracted design services.



When in-house professionals provide design services (either as the prime or specialty design professional for a certain component), the ultimate responsibility still lies with the party under contract for such services. The Design Builder retains risk in both design and construction. Many times a Design Builder as construction contractor who subcontracts the design to a consultant mistakenly assumes that by hiring a licensed design professional the liability is transferred to the design professional. However, even when the contract with the design professional contains all the proper risk transfer strategies (e.g., indemnity agreements and waivers of subrogation), the Design Builder still bears a significant degree of vicarious exposure.

SPECIALTY SUBCONTRACTORS

Often, the vicarious design liability inherent in lower-tier contracts with subcontracts with subcontractors goes unnoticed. For example, a mechanical / electrical / plumbing (MEP) contractor may perform some of the design, as well as

the installation. In this case, the Design-Builder or GC holds a contract for both design and construction / installation, and assumes the liability of any negligent acts as a result of the MEP's services. This can occur for contracts related to curtain walls, glazing, exterior insulation finishing systems (EIFS), fire suppression systems, retaining walls, alarm systems, landscaping, etc. So, the key to uncovering design liability is to identify not only the design professional under a contract, but also those subcontracts that may contain an element of design.

SPECIFICATIONS

Performance based specifications focus on outcomes or results rather than the construction process. Conversely, design or prescriptive specifications detail and outline exactly how the Design Builder must construct a project. Performance based specifications allow the Design Builder to bring their own expertise, creativity and resources to the design and construction process without restricting them to predetermined methods or detailed processes of design specifications. Standards of care vary with the construction aspect of the Design Builder, who must work within the boundaries of performance or contract specifications. Further, standards of care regarding the design professional aspect of the Design Builder typically include working within the requirements of design codes (e.g. American Institute of Steel Construction; The American Institute of Architects, etc.) and the professional qualifications of the design professionals.

With only 30-50% completed plans and design specifications typically available before the start of early phases of construction, early design errors can result in faulty or failed construction. Early errors or omissions can even magnify problems with construction in phases further down the schedule. For example, errors in foundation design might be discovered after two or more stories of a vertical structure are completed.

FIELD MODIFICATIONS

Changes to the plans and design specifications during construction (i.e., field modifications or value engineering to save time and material costs) are professional decisions and can result in errors or construction failures, exposing the Design Builder to professional liability.

BUILDING INFORMATION MODELING

The automated use of Building Information Modeling (BIM) came about in the late 1980s. It is a very useful tool for the Design Builder, as the team of designers and constructors can virtually design and build a structure before actual construction begins or during the early phases of construction with only 30-50% completed design plans and specifications. Though this reduces errors, due to the human component of design, errors in the information input into

BIM can result in significant errors in actual construction. Any damages caused by project delay resulting from erroneous use of BIM to manage construction could result in professional liability.

CONSTRUCTION MANAGEMENT

Every Design Builder in the field is “inherently” performing construction management (CM), even if not under specific contract to do so. For example, field CM activities can include:

- Managing subcontractors
- Inspecting for faulty work (e.g., oversight of concrete work, including reinforcing steel spacing, form spacing, etc)
- Providing proper direction to subcontractors
- Establishing and maintaining the scheduling / sequencing of construction
- Managing project budgets
- Managing shop drawing for field modifications during construction

An error in any these tasks can result in professional liability.

In addition, faulty workmanship or flawed work performed during construction or installation of components of a structure may ultimately result in professional liability. Faulty workmanship can show up as a leaky roof, buckling or cracking walls, collapses or settlement issues, or problems with wiring or plumbing. While the faulty work itself should not expose the GC to professional liability, the allegations can be made of negligence in the management of subcontractors and the failure to detect such faulty work.

CONTRACTUAL RISK

Contracts between design firms and construction firms that comprise the Design Build team can include limitations of liability (LoL). The LoL often limits the liability of the design professional to only the fees paid for their services, such as \$250,000, or a set maximum, such as \$1,000,000. This can be a problem, especially when contractors protective insurance is involved as such coverage is only provided where the insured is legally entitled to receive these damages from the design professional.