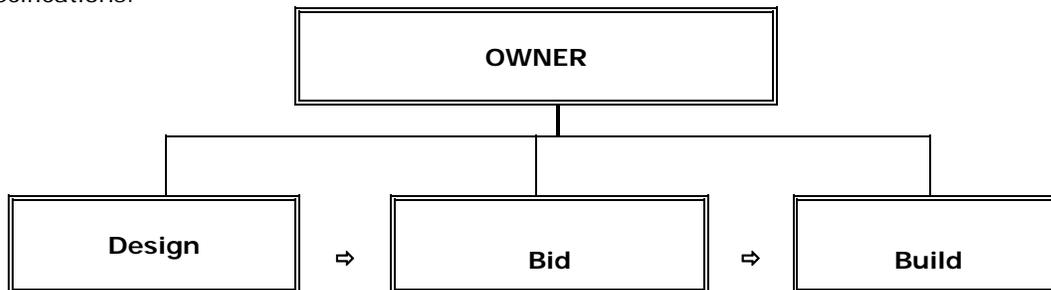


Design/ Build

I. Background

During the 1990s the construction industry moved to better understand and support the design/build (“D/B”) system of project delivery. This has resulted in many public and private projects being performed on a design/build basis. The project sizes vary from the routine and simple (a small warehouse) to the largest and most complex engineering contracts (e.g., Power Plants/Private Toll Roads). Design/Build is now established as a viable construction project delivery system used by both public and private owners.

Prior to the 1990s, the traditional approach to project delivery contemplated the design service would be performed by a design professional directly retained and contracted with the Owner and construction would be performed by a general contractor who is also directly retained and contracted with the Owner. This form of delivery system has been known as Design-Bid-Build. It contemplates that design, procurement, and construction of the project will proceed sequentially, with award of the construction contract delivered to the *lowest responsible bidder* based upon completed plans and specifications.



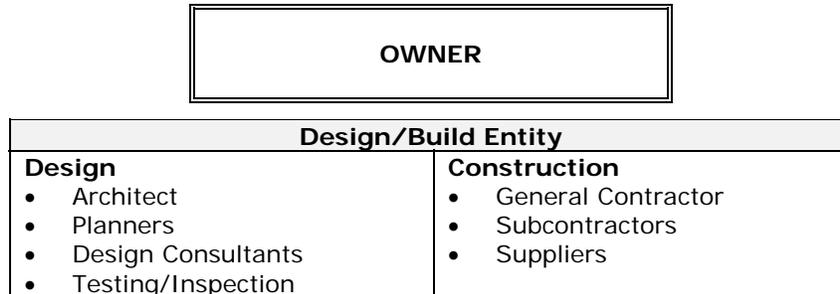
Some of the principal advantages of this traditional design-bid-build system include checks and balances between independent members of the team with no conflict of interest, advantage of price competition, and the benefit of a large body of judicial precedent that allocates liability among parties.

Potential drawbacks of this system include: (a) the assumption the Owner has the time and ability to coordinate the design and construction process; (b) since each phase of the process must be sequential, the design-bid-build process requires a significant amount of time from design inception to start of construction on to final completion of the project; and (c) the significant potential for conflict, claims, and litigation between the various players.

In contrast, the Design/Build system of project delivery is an integration of design and construction in one contract characterized by a single entity providing all the services necessary to design and construct the project based upon the requirements established by the Owner. This system of project delivery has experienced rapid growth in the United States. The advantages to this project delivery method include: (a) placing all responsibility on a single source, providing faster delivery of the project to the Owner; (b) setting a fixed or maximum cost for the entire project; and (c) assuring there will be no/minimal changes and conflict between the parties. The rationale for this last point is that the Design/Builder accepts both the project risk for design and construction, which limits other parties it may blame if problems arise. In addition, growing owner frustration with constant requests for change orders and other contractor/designer litigation issues has made the concept of a single source of responsibility for a project very attractive to owners.

Disclaimer

This paper is for general informational purposes only. None of it constitutes legal advice, nor is it intended to create any attorney-client relationship between you and the author. You should not act or rely on this information concerning the meaning, interpretation, or effect of particular contractual language or the resolution of any particular demand, claim, or suit without seeking the advice of your own attorney.



II. The Design/Build Entity

The D/B entity usually falls into one of the following four categories:

1. Joint venture (partnership) of a general contractor with one or more other construction firm(s) and/or design firm(s)
2. Sole venture general contractor who subcontracts the design services
3. Sole venture design firm who subcontracts the construction services
4. Sole venture company that has internal capabilities to perform both the construction and the design services

The two most common entities seen by sureties are the joint venture of a general contractor and design firm and the general contractor who subcontracts the design services to a design firm. When creating these kinds of relationships, the key is to be comfortable that the “marriage” of these firms for a particular project makes sense. It is critical that partners share a common approach to the execution of their respective roles within the joint venture as well as share a similar risk-reward philosophy towards construction.

III. The Design Risk

In the D/B system, the design professional can be an in-house employee of the D/B entity, an independent firm retained by the design/builder as a joint venture partner, or an independent firm hired by the design/builder as a subcontractor. This may be dependent on the professional licensing laws of the particular state where the project is located.

The Design/Builder, by contractually established terms, has primary responsibility and liability to the owner for the design risk. For the typical general contractor, this provides a much higher standard of care than a traditional design-bid-build contract where the design firm is independently responsible for the design exposure. The primary goal of the general contractor that is part of the D/B team then should be to properly allocate the design liability to the party that is responsible for actual performance of the work. Regardless of whether the D/B entity that signs the contract with the Owner is any of the four entities listed above, the D/B entity assumes all the design risk and must manage it responsibly. After selection of the “right” design firm, the two most common ways to manage the design risk is through either indemnification or hold harmless clauses and/or insurance transfer.

Indemnification or hold harmless clauses contained within any contract are a typical way to distribute the risk of loss to the party that may be more culpable or has the ability to insure for such a risk. When the D/B entity subcontracts the design services to a professional A/E firm, or it is part of a joint venture, it is essential to have proper indemnification language in the contract for the services the A/E firm is providing. Though the indemnity clause should clearly establish the design firm as primarily responsible for this exposure, it is not a foolproof solution. Indemnity or hold harmless clauses are only effective if the party providing the indemnification has the necessary financial resources to address the liability at the time, if required. If these resources prove inadequate, it does not

change the Design/Builder's primary responsibility for this exposure to the Owner. Since the liability tail for design build projects often is quite long, combining indemnification and hold harmless clauses with professional liability insurance to address this risk exposure is recommended.

Design errors and omissions exposures are often covered by professional Errors & Omissions insurance policies, which generally protect the insured against liability arising from negligence, errors, and omissions in rendering professional services. Extreme care should be used when evaluating this coverage since E&O policies may vary greatly both from insurance carrier to insurance carrier as well as insured to insured. Many policies have limitations that may impact claims periods, tail coverage, and potential claimants. A complete review of the policy may be necessary. In addition, many D/B entities look to purchase project-specific E&O coverage. These policies provide coverage dedicated to a specific project and may be available with extended reporting periods. For larger, more complex D/B projects, it is important to verify the financial stability of the insurance company.

When the D/B contractor subcontracts the design work, the contractor should have the design firm, as subcontractor, purchase the Professional Liability Insurance for the project and then name the D/B as an additional insured. This may provide protection from owner and other third party claims, but may not allow the D/B to make direct claims under the policy due to insured versus insured exclusions. The D/B contractor should work with the insurance agent to ensure that the coverage provided protects the D/B in the broadest manner possible. On large project, it is now quite common to see Owner Controlled Insurance Programs (OCIPs) and Contractor Controlled Insurance Programs (CCIPs) that require a specific E & O policy be purchased to protect the entire project. It is critical with this form of coverage that the limit be adequate and that the tail period be sufficient to cover any long tail exposures. Often, there may be a gap between the tail coverage available in the marketplace and the time period under statutory state law in which a design E & O claim can be perfected. If no insurance coverage remains available from the project specific policy, the primary responsibility then shifts back to the D/B and the indemnification language of the contract and/or any practice policies that are in force.

IV. The Project Risk

The risk a D/B entity takes on will vary greatly according to the type, size, and complexity of the project being constructed. For example:

1. Buildings, apartments, and retail complexes usually offer nominal risk provided an Owner doesn't require specialized mechanical, electrical, or other systems. Risk will increase proportionately to the uniqueness of the design, height, and/or size of the project.
2. For highways, road, and bridge projects, many federal, state, local, and quasi-governmental entities are now utilizing the D/B delivery system. The risk here is partly reduced since roads and bridges typically must conform to federal, state, or local design standards. Using proven designs for road and bridge construction, the design risk pertains mainly to planning, scheduling, and configuration issues.
3. Power or treatment plant "process" type projects are among the most risky. These often require complex mechanical systems or new technology with each plant being unique. In addition, Owners usually have specific demands for the services the plant produces and are often subject to financial penalties for delayed operation of the plant or the inability of the plant to produce at the desired level.

These are just a few examples regarding the types of construction projects. Clearly not all projects are ideally suited for the DB delivery system. Projects that are well suited are those with clearly defined, repetitive design, and construction requirements such as fast food restaurants and tract housing, as they usually need less input from the Owner throughout the project cycle.

A common reason for owners to use the D/B method is because it can help meet tight time deadlines. For example, the I-15 project in Salt Lake City, Utah, which was structured as a large D/B contract, allowed the State DOT to perform over \$1 Billion of highway construction to prepare the city for the Olympics in four years' time. Compare that with the traditional design-bid-build system, which would have taken eight years or more. D/B was the state's only viable option in that instance.

An important factor for the potential Design/Builder to consider is the Owner. The Owner's responsibilities do not go away with a D/B contract. They undergo a change which requires a shift in focus, mind set, and internal resources. In other words, the Owner, whether public or private, has to trust the design/builder to deliver a quality product on time and within budget. It is critical that the Owner communicates a clear statement of project requirements, designate responsible representatives, and makes expeditious decisions along the way, to avoid potentially significant problems. Finally, the Owner must demonstrate to the D/B entity and their sureties they have the funds available to finance the project and pay the D/B entity in a timely fashion.

Next, a thorough review of the contract documents, including all terms and conditions is recommended. The key provisions to review include scope of work, default provisions, performance guarantees, warranties, liquidated damages, delay, differing site conditions, pricing and payment provision (see the Checklist in section V. for more specific details).

Each owner may have its own form of D/B contract, and a contractor may be reviewing a different document with each project. However, as the D/B delivery system has grown over the past few years, demand has increased for a comprehensive set of well thought out, integrated contract documents. Several industry associations have published such a set or family of contract documents, including the Associated General Contractors of America, Inc. (AGC) and The Design Builders Institute of America (DBIA). These documents provide the contractual tools for assembling the project team and establish the legal relationships between the Owner, design/builder, architect/engineer, and construction trade subcontractors, through a consistent statement of each party's rights and responsibilities.

Owners may not use these forms, and public owners will tend to have their own documents. A D/B entity should review its subcontracts and subcontract bond forms to ensure that exposures assumed under the D/B contract are contractually allocated to the subcontractor or supplier responsible for that portion of the work. The same goes for risk they are assuming under the bond(s) they provide to the owner on a D/B contract.

Finally, the D/B entity should have a sound risk management program in place. This requires a thorough understanding of the current available insurance products and the ability of insurance to absorb certain risks that are inherent in a D/B project. The D/B contract will have certain insurance requirements listed in the contract. There are others which the D/B entity should consider purchasing on its own, including, but not limited to:

1. Workers Compensation and Employers Liability Insurance covering injury to workers.
2. Commercial General Liability (CGL) Insurance covering third-party bodily injury and property damage, faulty construction, and workmanship.
3. Professional E&O Insurance covering faulty design (including project-specific policies).
4. Contractor's Pollution Liability covering third-party environmental bodily injury and property damage and clean-up.
5. Builders Risk insurance covering first-party damage to property of the Owner, contractor, and supplier during construction.

Other forms of insurance which may be available for purchase include efficacy insurance covering liquidated damages for late project completion or deficient performance; and force majeure insurance to cover debt service for events such as earthquakes, strikes, and other similar events.

Other forms of risk transfer or security:

1. Letters of Credit
2. Third Party Guarantees

V. Design/Build Checklist

1. Licensing Requirements
 - a. Individual State Law – Is Design/Build Legal?
 - b. Which Entity or Person must be licensed?
2. Contracting Entity Structure
 - a. Joint Venture/Sole Sponsor
 - b. Design Firm the sponsor or subcontractor?
 - c. Other

Note: Contracting Entity accepts both the design risk exposure from the Owner as well as its standard construction exposure. This is a higher legal standard of care than either the traditional A/E or Contractor provides in a traditional design-bid-build contract. Negligence standards may not apply.

3. Design Liability
 - a. Self-Insure – Retain or Uninsure
 - b. Insurance Options (Contractor or JV Purchased, OCIPS)
 - i) Project Specific E & O (Owner procured? or Contractor Procured?)
 - ii) Practice Policy – Claims-Made or Occurrence? Cancellation Provisions?
 - iii) Tail Coverage.
 - iv) Commercial Availability.
 - c. Insurance Options (Subcontracted)
 - i) Project Specific E & O – Named as Additional Insured.
 - ii) Practice Policy – Claims-Made or Occurrence? Cancellation Provisions?
 - iii) Tail Coverage – Enforceable.
 - iv) Insured vs. Insured Exclusions.
 - d. Statutes of Repose/Limitations
 - i) State Specific – Know Statute.
 - ii) Design Liability Excluded from Bond – Contractor Still Carries the Exposure. This may divert financial resources from performance of current backlog levels.

We suggest consideration of project specific coverage with a tail of three to four years if possible. Still, design defects may arise after the time period for any commercially viable insurance product. Unless a practice policy is in place, this exposure would be uninsured and retained by the Contractor.

4. Project Risk
 - a. Scope of Work
 - b. Duration – Longer time frame – typically greater risk
 - c. Process/Output Guarantees? Specific Performance?
 - d. Long-term Maintenance or Warranty Exposures?

5. Contract Risk

- a. Review the Contract Form – Standard or Owner Drafted? Design/Build in Form?
- b. Specific Provisions for Review:
 - i) Award – Time frame for award. May be extended.
 - ii) Bond Forms – Limited to standard Surety exposures? Proposal bonds often forfeiture.
 - iii) Scope of Work – Well defined with risks allocated clearly.
 - iv) Indemnification Clause – Allocation of risk on a comparative negligence standard between Owner and Contractor. Consequential or indirect damages should be excluded.
 - v) Hazardous Materials – Owner should assume responsibility for all existing hazardous materials on site and sign all manifests as generator.
 - vi) Liquidated Damages – Should be finite and capped at a maximum percentage of the total contract amount (especially if performance-related). It is critical the project have an overall liquidated liability cap as it establishes a downside limit for our contractor.
 - vii) Change Orders – Typically a Contractor's ability to request change orders is greatly limited.
 - viii) Force Majeure – Contractor may be asked to assume time and/or financial risks for events beyond its control. These may or may not be insurable.
 - ix) Warranties – Determine type and duration. Try to limit to construction items. Identify performance or operating guarantees.
 - x) Site Conditions – Contractor typically must assume most of the risk.
 - xi) Government Law/Statutory Code – who bears financial risks for changes during the project?
 - xii) Utilities – Determine who bears risk for relocation of existing utilities and coordination of this work with the appropriate utility or government agency.
 - xiii) Permits – Same as above. Who bears risk for licensing, right of way acquisition, and obtaining appropriate permits – this includes change in law impacting the ability to perform the project (especially critical on long term contracts).

