

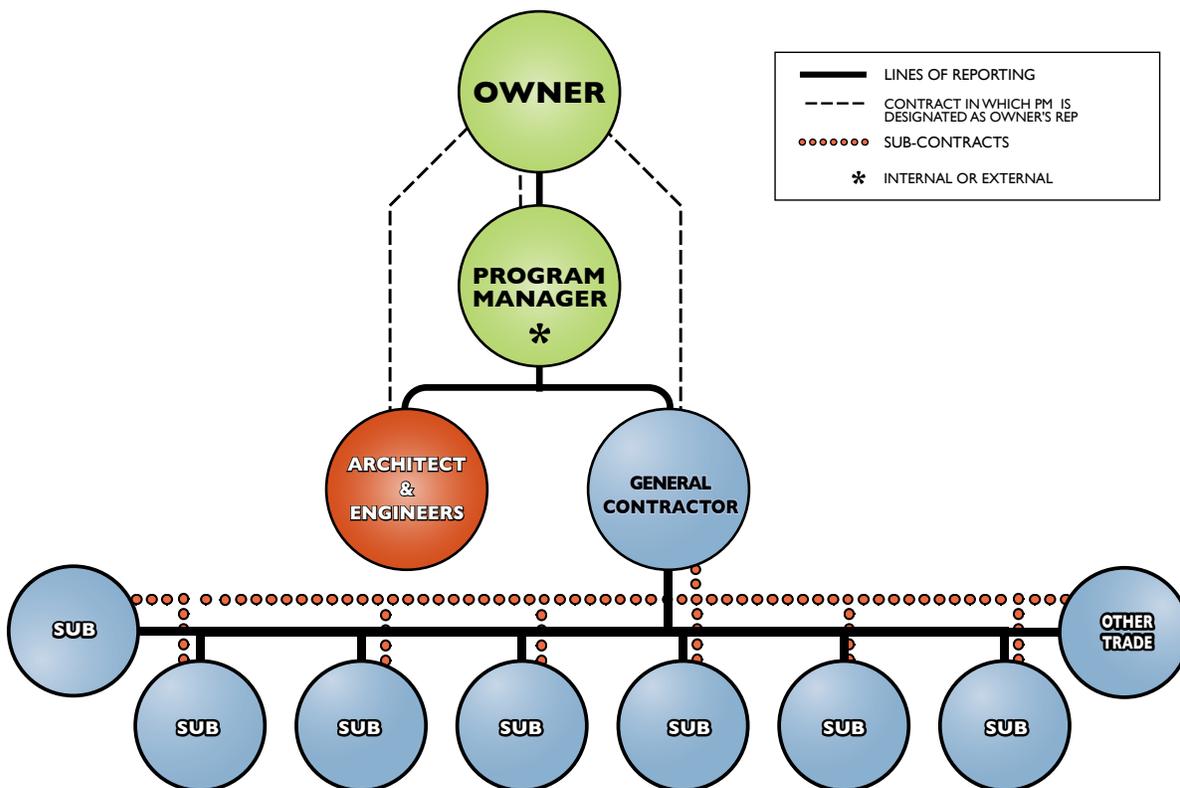
For a **Design-Bid-Build** Project

The Design-Bid-Build project delivery method is thought of as the traditional method by most people in the construction industry and related professions.

Although various alternatives to this traditional method have come into greater use in recent years, some for as long as 40 to 50 years or more (in the case of Design-Build), the traditional Design-Bid-Build method is still preferred by many owners. Many owner organizations, particularly in the public sector, continue to be oriented primarily to this method.

The traditional method has a number of fundamentally sound aspects. It is a logical and orderly method that is well understood throughout the United States and many other parts of the world. It easily meets all procurement procedure requirements, being free of conflicts of interest. It provides a clear and transparent method for obtaining direct “apples-for-apples” competition for a fully described and illustrated end product before construction starts as does no other method except Bridging and Enhanced CM-at-Risk. It also provides for the highly desirable direct professional relationship between the owner/user and the architect-engineers for the project.

The diagram shown below illustrates the basic organization of a typical Design-Bid-Build project.



Design-Bid-Build

Main Phases of a Typical Design-Bid-Build Project



- SD** Schematic Design
- DD** Design Development
- CD** Contract Document ("*Working Drawings and Specifications*") Prep

The Architect and the Architect's Consulting Engineers ("AE") first carry out Schematic Design ("SD"). With the Owner's review(s) and approval, the AE then more fully develops the drawings and preliminary specifications in the Design Development ("DD") phase of services. Then, with the Owner's further approval, the AE prepares the final "working drawings" and detailed specifications and contractual requirements referred to as the Contract Documents ("CD").

At that point the Owner, with the assistance of his professional advisors, has the completed Contract Documents with which competitive bids may be received from general contractors or a price may be negotiated with a general contractor who might be selected at that point or earlier. During the construction phase the AE typically works with the Owner's Program Manager (internal or external) to observe the work in progress, review shop drawings, approve progress and final payments, process any change orders and generally act as an advisor to the Program Manager and the Owner.

This set of services is in accordance with a standard form of Agreement between Owner and Architect as published by the American Institute of Architects as well as similar forms of agreement used by many public and private sector owner organizations.

Issues with the traditional process that have caused some owners to change to alternative methods include the fact that the pre-construction phase is fairly lengthy with the Owner having a good bit of project funds at risk before obtaining a firm price on construction. (That is actually also the case with all other project delivery methods except Bridging). The method also leaves the Owner somewhat vulnerable to Contractor initiated changes orders and claims, as well as delays and additional costs for the Owner in correcting post construction problems discovered after occupancy. Also, some of the best sources of knowledge on construction technology and practical construction methods (specialty sub-contractors and building product manufacturers) are not easily involved in the design process in this method.

Typical Program Management Services to the Owner for a Design-Bid-Build Project:

PRE-DESIGN PHASE

- Assist the Owner in making final decisions about the project requirements and scope, possibly carrying out for the Owner preliminary technical investigations as to the suitability of the site, evaluating with and for the Owner potential legal and permitting constraints. As necessary, assist Owner in site acquisition.
- Initiate and operate/deliver thereafter a dynamic database, cost-loaded scheduling and reporting Program Management Information System (PMIS) along with briefing reports for senior executives of the Owner's organization. These may be web-based per authorization from Owner.
- Prepare or determine that a full Program of Facility Requirements ("Program") has been prepared and approved by all stakeholders in the Owner organization. Put into a format, or determine that the Program has been put into a format that is suitable as an exhibit to the contract with the Architect and Engineers.
- Simultaneously with above during the review and approval of the Program, develop a Total Project Budget ("Budget") covering all hard and soft costs as well as non construction related procurements such as furnishings, moveable equipment, security systems, signage, fees, taxes, financing costs, etc. along with contingency funds. This requires a skilled PM with thorough knowledge of the design process. The objective should be for the PM to develop and recommend a Total Project Budget with the construction contract price line item set at a figure that the PM knows a competent AE can design within.
- Simultaneously with above, develop a Master Project Schedule ("Schedule") for all major activities of all parties from the pre-design phase through occupancy.
- Determine that the Program, Budget and Schedule are compatible with one another. Assist the Owner in resolving any compatibility issues.
- Assist the Owner in identification of candidate Architects and Engineers ("AE"). Obtain information about qualifications and/or carry out due diligence whether selections are to be competitive or single source.
- Prepare a project-specific form of Agreement between Owner and Architect for use in the AE selection process.
- Assist the Owner in the award of the AE contract.

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DESIGN PHASE

- Throughout the design phases carry out cost analyses and cost control procedures with verification of the CM's estimates and quotes using a multi-track costing program with line item by line item reconciliations.
- Track schedule adherence throughout the design and construction phases and advise the Owner and other parties on any necessary recovery scheduling.
- Throughout the design phases and construction coordinate the approval process with all users and stakeholders in the Owner's organization as well as with any separate financing and/or approval agencies that are not to be processed by the Contractor.

CONSTRUCTION PHASE

- Manage for the Owner market stimulation, identification of prospective bidders (or single selected contractor), the obtaining of final construction contract proposals and award of the general construction contract.
- During the construction phase, administer the construction contract on behalf of the Owner. Coordinate the inspections of the work carried out by the Architect and Engineers and/or separately engaged inspectors. Review and approve on behalf of the Owner all progress and final payments to the Contractor as well as to the Architect and Engineers along with any other vendors or providers of services.
- Assist the Owner in closing out the design and construction contracts and provide records for retention.