



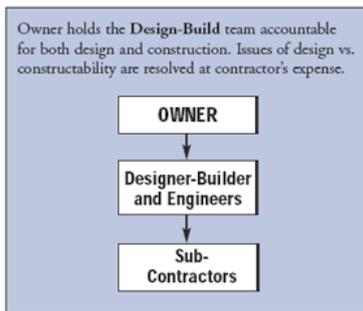
Design-Build, Design-Bid-Build and Contract Management *How to select the one that is right for you!*

When selecting a project delivery system, you will need to consider:

- ✓ length of time you have to build your facility;
- ✓ the complexity of what you are building;
- ✓ does it comply with state procurement statutes
- ✓ available time and expertise of your in-house staff;
- ✓ your budget constraints;
- ✓ how much risk are you willing to assume in the building process

Let's compare each delivery system to the above considerations.

	Design-Build	Design-Bid-Build	Construction Manager
Fastest to construct	✓		
Complexity of project		✓	
Complies with state procurement statutes		✓	
Minimal time and construction expertise of owner & staff			✓
Most cost effective	✓		
Least risky for owner	✓		



Design-Build:

When Design-Build (DB) is selected, you contract with a DB team, which is often a joint venture of a general contractor and a designer. Usually general contractors are the lead members of this team. The team designs the facility based on discussions with you about the needed functionality of your new building. At an early point in the process, the DB team will negotiate a fixed price contract to complete the design and construction of the facility. Once you approve the design, the design-build team is then responsible for construction of the project and for the coordination between design and construction.

Fastest to construct – because with Design-Build you eliminate the weeks/months to create the bid document, request bids, and analyze bids when using the Design-Bid-Build delivery system. Eliminating the bidding process is the most obvious timesaver but there is more. Redesign issues for various reasons



are also a threat to construction schedules. One of the most common design issues is the original design is too expensive and not within the allocated budget. You see a lot of this in local city capital improvement projects. Headlines such as "Recreation Center on Hold Due to Bids \$150,000 Over Projected Budget" are not uncommon. Depending on the design issues it could take from days to weeks to months to redo. Along a different line for saving time is that some work, such as site preparation, can begin prior to the finalization of all of the building details as is required with Design-Bid-Build.

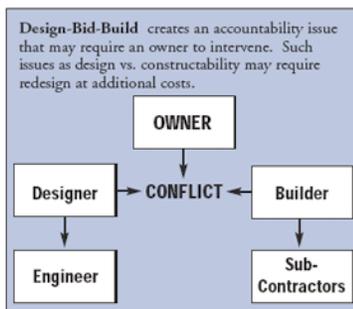
Most cost effective – because with Design-Build your facility is designed around your budget. The designer and general contractor know what material and labor cost so they can design a building or an addition using the most cost effective materials and methods. If you were to use Design-Bid-Build you may experience the following costly design issues:

1. The architect has designed a facility that cannot be built for your budget (you find this out during contractor bid time after all the drawings have been completed)
2. The architect has designed something that cannot be built as designed (you find this out during construction).

If for any reason these design issues do occur, with Design-Build, the design-builder is responsible for fixing them at no cost to you. Also with Design-Build, it is easier to discuss with the design-builder your options for lowering costs vs. guessing if the changes the architect is making will be enough to put you within your budget. Because Design-Build is faster you are less likely to incur additional costs due to extending your interim financing.

If you were to hire a construction manager to oversee your project, it would be an added cost over and above the cost of your facility whether you choose the DB or DBB project delivery system. However, with complex projects a construction manager may save you enough money to pay for himself by using his expertise and knowledge to decrease the cost of your project.

Least risky for owner – because with Design-Build there is one person/team to hold accountable if problems arise. You do not need to mediate conflicts among your architect, engineers and contractor, place blame (liability) and resolve issues either legally or through negotiation. With Design-Bid-Build you usually have liability for design and constructability in your contract with the general contractor. With Design-Build once the contract has been finalized (typically a fixed price contract), the design-builder is responsible for all design and/or construction issues and must resolve them at no cost to you.



Design-Bid-Build:

With Design-Bid-Build (DBB), the owner engages an architect to prepare the design of the complete facility, including construction drawings, specifications and contract packages. The design package is then presented to general contractors who bid for the work and engage subcontractors to provide various aspects of the project. Usually the lowest bid is selected. The selected contractor is then responsible for building the facility according to the design. With this project delivery



system, the owner retains more control over the project with the individual selection of architect and contractor.

This project delivery system has been the most widely used, most well understood because of clearly defined roles for the parties involved.

Complexity of the project – If the owner wants special aesthetics for his building, then the Design-Bid-Build process provides the extensive architectural support needed to produce the aesthetics. Also for buildings that are not the basic square, T or L-shaped, an architect will be needed to draw up the plans so typically DBB is used.

Complies with state and/or federal procurement statutes. Typically public funds are spent with the lowest bidder only. This normally precludes letting design and construction contracts to the same entity which is what happens with the Design-Build delivery system. However, with the concept of Design-Build becoming more popular as a project delivery system, many existing laws addressing public funded projects are under review. There could be changes in the near future moving away from requiring separate bidding for the design and construction of public projects.

Construction Management:

Construction Management (CM), while thought of and included in delivery system discussions, is really a distinct set of services that can be used with any project delivery system. A construction manager provides services to you as necessary to extend or supplement yours or your staff's expertise, and to manage the construction process to help address some of the shortfalls of the project delivery system chosen. The Construction Manager acts on your behalf to provide impartial advice concerning the project. You can select the CM services you need, from pre-design and design phases through the construction phase.

Minimal time and construction expertise of owner and staff - because a Construction Manager has design, construction and project management knowledge and expertise and can be dedicated to your project while you and your staff are busy running your business. Whether you have selected the DB or DBB project delivery system, the construction manager can ensure the success of the project with minimal risk to you.

Current Trends

In 1985, only 6% of building construction used the DB Project Delivery System and only 12% used a CM. Overtime, more and more companies have opted for the less risky DB method. In the very near future the construction percentages will be approximately DB 45%, DBB 45% and CM 10%.

What The Statistics Say

While all of this sounds good, what has been the real world experience for these project delivery systems? The Construction Industry Institute (an independent organization dedicated to research of the



construction industry) in collaboration with researchers at Pennsylvania State University did a study. Bottom line, the study showed:

- ✓ Unit Cost: Design-Build at least 4.5% less than Construction Management and 6% less than Design-Bid-Build.
- ✓ Delivery Speed: Design-Build at least 23% faster than Construction Management and 33% faster than Design-Bid-Build.
- ✓ Quality: Design-Build exceeded quality expectations at all levels.