
 <p>The cornerstone of confidence™</p>		<p>April 2005</p>
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<p><b>SEMINARS</b> <a href="#">PinnacleOne Institute</a></p>	<p style="text-align: center;">What Project Delivery Approach Should I Use?</p>	
<p><b>SERVICES</b> <a href="#">Program &amp; Project Management</a>  <a href="#">Dispute Avoidance &amp; Resolution</a></p>		
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1. Design/Bid/Build (Also called Traditional or Hard Bid delivery)
2. Construction Manager @ Risk (CM @ Risk)
3. Multiple Prime Contractors (Multi Prime)
4. Design/Build

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In years past, virtually all owners conceived a project, hired an architect and/or engineer to design it, and then obtained bids from contractors and contracted with the lowest bidder to build it (i.e. Design/Bid/Build). This was for a time the only way the public sector could approach the design and construction of a project. On the other hand, the private sector has for many years utilized other approaches that provided for selection on factors other than just lowest price. Recognizing the potential benefits, the Federal Government took the lead and many states have followed in allowing now what is called Alternative Delivery Methods.

Now many contractors are also being hired by owners to provide advice during the pre-construction phase and then to construct the project for a guaranteed maximum price (Construction Manager @ Risk). While Contractor Manager @ Risk provides the owner independent preconstruction services for a fee, once construction starts that advisory role ends and the CM becomes the contractor. The contractor holds all subcontracts and profit/loss risk. The work risk in Construction Manager @ Risk says it all. Once construction begins, the Construction Manager @ Risk should not be expected to act as an independent representative of the owner, particularly if that problem adds to the Construction Manager @ Risk's costs.

The (Multi Prime) approach is unique in having all the various trade contracts made directly with the owner. For many owners, not having a single point of accountability creates added coordination and risk exposures. To manage and coordinate all the independent trade contractors on a construction site requires the owner to hire a firm to oversee the efforts. This is done by an independent representative of the owner not at risk for a fee, usually referred to as Construction Manager as Advisor.

Some owners are also contracting with one entity to take responsibility for the project from the design phase to occupancy (Design/Build). This provides owners one point of responsibility for designing and constructing the project, to meet a set of established program, aesthetic, and performance standards established by the owner as part of the Design/Builder selection process. The key difference in this approach, compared to the other "core" approaches, is the architect is not hired by the owner directly and does not represent the owner.

One advantage of Design/Build is the ability to speed up the design and construction time period. However, this contractual arrangement provides no representation for an owner other than what he or his own staff can provide. It also puts tremendous pressure on an owner to know and fully define clearly what criteria and quality for the project at the very start. Any changes in the criteria or design can create a change order, potentially increasing the cost before construction even begins!

Construction Manager as Advisor, Project Management, and Program Management are emerging and growing approaches for those owners without adequate in-house staff to oversee the details of the design and construction process. More commonly these days, these owners are outsourcing to an independent firm, who is not directly involved in the design or construction, to represent them and serve only their interests. For a single project, this is referred to as CM as Advisor or Project Management. In a situation when a large multi project program is involved and to manage the sheer volume, the oversight role is typically referred to as Program Management.

*What project delivery approach is best?* Each method has advantages and disadvantages depending on the owner's circumstances and goals. For this reason, the answer to this question cannot be easily or quickly given. Key to the choice are the answers to at least the following questions.

#### **Who Does the Owner Want to Be Accountable?**

Is there a single point of accountability for the owner to make sure the project is a success? On one end of the pendulum is the Multi Prime approach. In this method, the owner holds contracts with the architect and each trade contractor

instead of a contract with a single general contractor. This creates more opportunities for blaming the owner and claims. The other end of the pendulum is the Design/Build method. This is as close to one-stop shopping as an owner can get. The Design/Builder provides all services including design, construction, and often as a variation, even the financing.

### **Who Does the Owner Want to Represent and Protect Its Interests?**

Each project delivery option places the responsibility for the representation of the owner on different entities. Traditionally, when their projects were Design/Bid/Build, owners looked to their design professionals to represent them. When there is a Construction Manager @ Risk, they can also be viewed as independent representatives of the owner through the design phase. Neither the design professional nor the builder represents the owner on Design/Build projects and the owner is left to its own devices. If the owner does not have experienced in-house staff or adequate time to dedicate to the project, they will have no input or control of the process to protect themselves. Can you imagine going into any legal action without an attorney to advise, protect, and represent you? The Construction Manager as Advisor, Project Management, or Program Manager are the only approaches that through the entire process consistently allow for the sole protection of the owner's interests.

### **Which Method Will Deliver the Highest Quality Project at the Lowest Cost and Earliest Time?**

This is the single most important question in many owners' minds. These factors are often the deciding factors in choosing between project delivery approaches. As shown below, each core and emerging project delivery approach offers advantages and disadvantages when it comes to project cost, time, and quality.

#### **Design/Bid/Build**

- | Low Initial Competitive Construction Cost
- | Usually Takes the Longest Time

- | No Independent Owner Representation from Contractor
- | Maximum Owner Control of the Design Process

**Construction Manager @ Risk**

- | High Initial Project Cost Assurance
- | High Assured Value Engineering Capability
- | Generally Takes Less Time than Design/Bid/Build
- | High Quality Based Selection
- | Maximum Owner Control of the Design Process
- | High Independent Owner Representation Through Only the Design Phase

**Multi Prime**

- | Low Initial Competitive Construction Cost if Bid Out
- | Lack of Single Point of Accountability
- | No Independent Owner Representation from the Contractors
- | Maximum Owner Control of the Design Process

**Design/Build**

- | Shortest Project Delivery Time
- | High Initial Project Cost Assurance
- | High Assured Value Engineering Capability

- | High Quality Based Selection
- | No Independent Owner Representation from Design/Builder
- | Architect/Engineer is Not Representative of the Owner

For the most part, each of the core project delivery approaches is exclusionary of another and the owner must decide on the priorities. Is time, cost, or control over the design and construction quality most important? Which is least important? Furthermore, with many of the delivery approaches, once the choice is made, you are committed. For this reason, owners need to define their priorities very early in the process, recognize the risks associated with each project delivery option, and look critically at their capability.

The owner can use in-house staff or take advantage of the expertise and experience of an outsourced CM Advisor, Project Manager or Program Manager to provide oversight of the design and construction of its project and decide to use any of the core project delivery approaches. That said, if not used early in the design process, Design/Build is lost as a practical option. The use of CM as Advisor, Project Management and Program Management are growing trends as a result of their flexibility to tailor the services to take advantage of expertise and provide continuity of the independent owner representation role to fit the delivery method preferred by the owner.

#### **Construction Manager as Advisor or Project Manager**

- | High Assured Value Engineering Capability
- | High Independent Owner Representation Through All Project Phases
- | High Quality Based Selection
- | Maximum Owner Control of the Design Process

#### **Program Manager**

- | High Assured Value Engineering Capability
- | High Independent Owner Representation Through All Project Phases
- | High Quality Based Selection
- | Maximum Owner Control of the Design Process
- | Maximum Control Over Large Multiple Project Programs With Accelerated Schedules

There is no one perfect project delivery approach. Each firm that utilizes one or another method will tell you many reasons why theirs is the best. As you can see, the selection of an approach is a complex task involving many important decisions. The choice of project delivery method you make early at the project's inception will be one of the most important in determining how successfully it is completed.

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