

## 2.0 Contracting and Project Delivery Systems

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As an Owner, it is necessary to choose an overall project delivery and contracting strategy which efficiently delivers the project. An understanding of the difference between a project delivery method and a contracting format is important because it impacts these decisions.

### Contracting Formats

A contracting format is an arrangement for the distribution of construction project risk--most frequently cost or performance risk--between the parties to a contract. Cost risk is the risk of being able to do something within a given budget limit. This risk distribution is accomplished through methods of arriving at or limiting the amount of money to be paid. Performance risk is the risk of being able to complete the project on time and at the level of quality as agreed. This is distributed through the technical terms of the contract, either by describing requirements for the finished product only, or by describing specific methods by which a task is to be performed. Contracting formats require some form of specific scope statement in order for the parties to make an accurate economic judgment as to cost or price.

A number of contracting formats have evolved as a result of the desire of Owners or Contractors to either shift or share the risk (usually cost) of a project through contractual provisions or to increase the speed of delivery of construction.

Public, and quite frequently private, works are usually procured through a sealed bid, fixed price contract or the equivalent. In these contract arrangements, most of the price risk is intended to shift to the Contractor. In order to provide a reasonable and enforceable scope definition to the Contractor so that bids can be developed, fixed price contracts are almost always based on a completed design. The need to have a completed design in hand prior to the commencement of construction requires a longer lead time for the construction process and requires a linear approach to project delivery that reduces flexibility.

Seeking more flexible alternatives, the private sector developed a host of risk-shifting and risk-sharing contract variations, including negotiated fixed price, guaranteed maximum price (GMP), cost plus fixed or variable fee, time and material, unit price, prepurchasing, and others. These contracts run the spectrum from the lump sum, where all of the cost and schedule risk is placed on the Contractor, to cost reimbursable situations, where the Owner agrees to pay all costs. Most of these methods are now also being implemented, to some extent, by public sector Owners.

Performance risk shifts are accomplished by the writing of end-product or performance contracts. When applied to a complete project, these are typically known as design-build contracts. If this form is coupled with a GMP, theoretically

the Owner has little risk either in cost or satisfaction beyond the GMP. Since a substantial part of the desired outcome from these projects is subjective, the risk of misunderstanding is large and can easily result in either disputes over what is included in the GMP or in disappointment on the part of the Owner in the final project as delivered.

## Project Delivery Methods

A project delivery method is a system designed to achieve the satisfactory completion of a construction project from conception to occupancy. A project delivery method may employ any one or a number of contracting formats to achieve the delivery. Project delivery methods define scope as part of their process.

Construction projects in the United States have traditionally been delivered through the design-bid-build sequence, securing the services of a Designer who will design the project, aid in the procurement of a Contractor, and often inspect the work of the Contractor for compliance with the specification. This sequence usually leads to the sealed bid, fixed price contract believed by many to offer the least capital cost to the Owner as well as the one generally required by public procurement regulations to assure fairness in the procurement process. However, this “traditional” project delivery system allows the use of many contracting formats, since there is no inherent constraint on the allocation of price risk.

Because of financial, organizational and time constraints, other project delivery methods have evolved to fit particular projects and client needs. These include:

- » *Multiple Primes:* The Owner uses separate contracts for various construction disciplines such as general construction, structural, mechanical, electrical, etc.
- » *Developer Manager:* The Contractor will acquire (or have constructed) a facility to suit the needs of the Owner who in turn commits to lease the facility.
- » *Design, Build, Operate and Transfer:* The Contractor will design, build, operate and maintain a facility for a fixed period before transferring it over to the Owner.
- » *Design-Build:* The Owner utilizes a single contract to acquire the services of both Designer and Contractor to construct a facility.

These delivery methods all share the characteristic of placing the Owner in what is a potentially unequal relationship with the Contractor. These systems may at times require the Owner to place the fate of the project in the hands of an organization or organizations whose interests may be in conflict with those of the project or of the Owner, due to contractually assigned risks.

In addition, these delivery methods all share the same disadvantages in that the Owner is required to have sufficient staff resources to fully define the project or be willing to allow another entity to define it. The Contractor or Designer or Developer has clear risks that it has assumed in its arrangement with Owner and has developed the expertise to manage these risks.

Parties who bear the risk in an endeavor are due their rights to control their destiny. The greater the risk profile, the greater the need to control. Loss or perceived loss of control leads to fear of a negative outcome. This fear leads to an assertion of the right to control, resulting in frequent disputes. Therefore, the key to successful management of the construction process is the placement of risk in the hands of those who are best equipped to manage it.