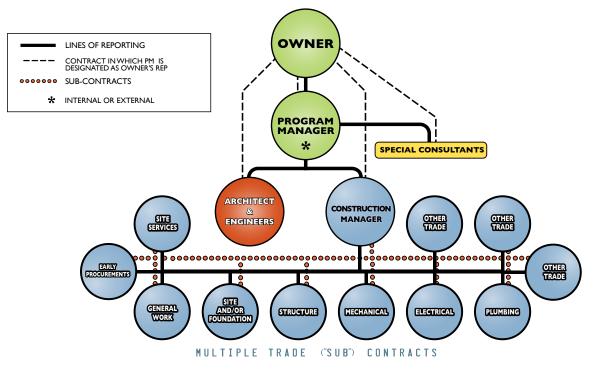
Recommended Program Management Services For a **CM-at-Risk** Project

The Construction Manager at Risk project delivery method (CM-at-Risk) can be a very comforting way to manage the design and construction of a project as long as the Owner's organization is one that is in a position to rely upon relationships in the procurement of construction. It can also be useful in projects for other types of Owners as long as procedures for retention of leverage are provided for in the Owner-CM contract and an appropriate plan of management is followed.

In CM-at-Risk, the Owner will either select the Architect/Engineers first so they can be involved in the selection of the CM or the CM and the Architect/Engineers will be selected at the same time. In some cases the CM may be selected before the Architect/Engineers and may be involved in their selection. If an external Program Manager ("PM") is to be engaged by the Owner, the PM, acting as the Owner's representative should be selected first to assist the Owner in the preparation of the contracts for the CM and the Architect/Engineers as well as assist the Owner in the selection process.

The CM would typically assist the Owner and the Architect/Engineers with input on costs, cost effective construction materials, constructability, scheduling and sequencing issues throughout the pre-construction design phases. Continuous consultation, estimating and providing input into the design and construction schedule would be the norm. In many cases, at design milestones, the CM would provide the Owner, Architect/Engineers and the PM with the most reliable possible estimate of the final total cost. Sometimes, these cost statements would be issued in the form of a Guaranteed Maximum Price ("GMP"), which is sometimes referred to as a "G-Max".

The CM is usually a general construction contractor with technical and financial capabilities appropriate to the project at hand or a professional CM organization with sufficient financial capabilities to accept the responsibilities under the contract with the Owner for the CM-at-Risk method.



CM-at-Risk

Existing relationships often provide the best and easiest way of purchasing design and construction services. This arrangment of buying on relationships ("Relationship Buying") of major procurements (such as construction) implies that the seller (in this case the Contractor) is so certain of future business opportunities from the buyer (the Owner), that the Owner can prudently be assured that it is getting fair prices and good performance. In this instance the Owner is "safe" in allowing itself to be put into a position with little or no leverage. However, relationship buying can also be the most dangerous way for the Owner to make a large procurement, especially if the Owner is an organization that is not truly one that can or should rely upon relationships in construction procurement, or if the Owner is not perceived of by the industry as having those characteristics of a relationship buyer of construction.

Those characteristics are:

- (1) an Owner with a steady stream of projects that offer future business opportunities to the contractor as well as Architects and Engineers.
- (2) an Owner with an organization that has a relatively simple contractor selection process which only involves a few people in the Owner organization,
- (3) an Owner organization in which there are no side issues in the selection process such as political issues or aspects not directly related to good past performance and fair prices, and
- (4) an Owner organization in which there are no legal or policy constraints prohibiting single source selection for major procurements. If any one of these is not the case, then the Owner should probably not think of itself as a relationship buyer of construction.

In order to obtain reasonable results under the CM-at-Risk method, an Owner who does not truly qualify as a relationship buyer of construction should be sure that contractual provisions and program management procedures are put in place to take into account the Owner's characteristics and constraints.

Those procedures will mainly relate to how the GMPs are relied upon and defined. A GMP issued by the CM before 100% completion and documentation of the Architectural and Engineering design is not fully enforceable for the Owner and, therefore, can be detrimental to the Owner, giving the Owner a false sense of security. This can be disastrous for the Owner in the event of issues related to price, scope or quality arising between the Owner and CM. Thus, for Owners who cannot or should not rely upon relationships in construction procurement, no final commitment for the construction should be made until the 100% complete and accepted drawings and specifications point is reached and the price is satisfactory to both parties.

Construction work or procurements that must be started early should be awarded on a freestanding transferable basis and organized in such a way as to keep it separate and assignable to another CM or contractor. Also, under CM-at-Risk, because of the price guarantees issued by the CM, there is a conflict of interest between the CM and the Owner.

Typical Program Management Services to the Owner for a CM-at-Risk 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 contracts with Architect, Engineers and CM.
- 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, Engineers and CMs, obtaining information about qualifications and/or carry out due diligence whether selections are to be competitive or single source.

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DESIGN PHASE

- Assist the Owner in the development and award of the design and CM contracts.
- 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

- During the construction phase, administer the CM's contract in essentially the same manner as the Owner and PM would administer a cost-plus flat fee general contract. 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 CM as well as to the Architect and Engineers along with any other vendors or providers of services.
- Assist the Owner in closing out the various contracts and provide records for retention.