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A BETTER WAY TO BUILD

Lower Costs and Higher Quality

Why has Construction Management at Risk (CMR) gained such popularity with construction companies and clients alike? Some will tell you it simply is a more effective and painless way to get a building constructed. Many will talk about how well CMR facilitates a project and provides the structure to stay on track with respect to both budget and schedule. Others will cite the fact that this delivery system is non-adversarial. All will attest to the fact that CMR gives the “highest” quality for the dollars expended.

To many people, however, the way in which CMR works remains a mystery simply because it has never been explained. Even some firms that are active in the construction industry do not fully understand the capabilities of CMR. Some builders oppose it for reasons that are fuzzy and obtuse at best. They tend to resist change which is a general tendency of the human nature. Usually, what is unknown or different is feared. As some pundit once said, “They don’t want to be confused by the facts.” Fortunately, CMR is a relatively easy concept to understand, but very few informative articles have been made readily available to the public. Hence, the layperson sees his local city, county or school board, spending “his or her” hard earned tax dollars building new facilities and reads in the local paper that the process being used is CMR. They have no way of knowing that this process will cost less and produce a high quality building. It is not his or her fault because no one has specifically taken the time to explain, in detail, how it all works.

Probably the best way to begin is by telling the reader what CMR is not. “Hard-bid” is a familiar process that most folks know about. Using that delivery methodology as a starting point, let’s examine some of the problems inherent in the hard bid process that give credence to the solutions and control concepts offered by CMR.

Very simply put, the theory of hard bid is that by asking everyone (qualified and unqualified alike) for a price and by accepting the lowest price, that somehow magically, you are getting the “best” deal. We all know the old saying “You get what you pay for.” The problem is whether an owner really knows what they are getting under a hard bid scenario. Perhaps they often pay for what they think they are getting. Typically with the bid process the architect has already completely designed the building. The prospective bidders are given the construction documents on which to base their bids. The contractors may see terrible constructability problems with the design or they may see hardware and finishes specified that don’t make sense. The heating, ventilation and cooling system (or H.V.A.C. as it is colloquially referred to) may be too large or too expensive or over-engineered. The site may have problems. The list is endless. However, the contractor was not involved during the design phase. He had no input. His valuable expertise was not capitalized on by the owner. If he

wants to get the job, he must bid and bid it competitively as shown on plans and called for in specifications, even though he sees many difficulties down the line. The hard bid contractor must then assemble a collection of the lowest (not necessarily the best) subcontractor bids, consolidate them into one number which includes profit, overhead and contingency and put that number up against all competition.

Once the competitive bids are submitted by the General Contractor to the owner, the lowest qualified bidder is usually the one that is selected. In many states, "Qualified" as defined by the courts simply means that the low bidder must have a valid contractor's license. In some states, contractors are not even required to be licensed. Anyone located in one of those states can call themselves a contractor by simply hanging out a shingle. Poor past performance, lawsuits, shaky financial condition and a reputation for delivering projects way behind schedule are irrelevant issues in the public bidding process. The owner is obligated to take the bid even if they strongly suspect the contractor's price is insufficient to do the job. Private firms have the flexibility to ask only certain "selected" contractors to bid. Usually they are prescreened based on a stability and performance criteria. This is called a "closed" or "selected" bid list. Public entities who employ hard bid for their projects, must take a bid from any contractor, as long as the bidder fills out the forms correctly and gets the bid in by the deadline. Imagine the shock, concern, and surprise when the low bid on a major public project budgeted at \$3,900,000 comes in at \$500,000 under the next lowest bid. Are all the other bidders out of step? Is the low contractor that much more efficient? Can the job really be done for the amount of that bid, or did the bidder just make a horrible mistake and omit something of major consequence? Who will ultimately pay the penalty for the mistake? What will be the ultimate ramification of trying to tackle a job with insufficient construction monies? The result and answers are a foregone conclusion because if the owner is a public entity, under the hard bid delivery system, they must award the project to the low bidder. Another point to consider is that if your lowest bid is substantially higher than your target budget, it becomes almost impossible to value engineer the job back into the budget. This is because an artificial floor has been created by the bid process. This results in having to cut a dollar out of the job in order to get a 50 cent reduction in costs. Obviously this is not a very efficient or desirable circumstance. Hard bid can produce some very questionable quality issues because the contractor is fixated on cost, not how the job should be done. To use a comment attributed to an engineer with NASA who worked on the Apollo project, "How would you like to be blasted into space in a vehicle comprising 3,900,000 parts and components - each of which was produced by the low bidder."

Several years ago in Florida, a community college chose to hard bid an \$18,000,000 branch campus. A large out-of-state contractor bid on the job and was awarded the job with a bid that was substantially less than several local competitors. That campus is now completed, but not yet finished. Multiplicities of problems still exist and need correction. Thirty subcontractors are owed 1.8 million dollars and have been trying to collect from the General Contractor for ten months. The subcontractors chose to take their case directly to the architects and to the college, bypassing the General Contractor, who they contend has failed to communicate and respond. Everybody is finger pointing and trying to shift the blame for this debacle.

Regardless of who is right or wrong, the program of educating young people is being disrupted and additional time, effort (and no doubt) money will be required to solve this situation. How much better would it have been to have hired a Construction Manager who would assume all of the

contractual risks on the job, guarantee a maximum price to the owner and deliver the highest possible quality for the dollars expended? Hindsight is always 20/20. That community college learned from this mistake and is now utilizing Construction Management at Risk exclusively.

Construction Management at Risk is not a panacea, however, it is a very effective project delivery system that protects the rights of the owner, vendors, subcontractors and the Construction Manager on an equal basis. Let's look at how it works.

A Construction Manager performs basically three functions:

1. Preconstruction services
2. Construction services
3. Overall project management/process management

Optimally, a Construction Manager should be brought on board at the same time the architect is commissioned. They need to work hand-in-hand through the entire design process. From the construction management side, this is what is commonly referred to as Preconstruction Services. By being involved early-on, the Construction Manager can give the architect valuable input about costs, constructability, lead times for critical components, life cycle cost issues, systems analysis, and numerous other elements that contribute significantly to the success and quality of a project. Clearly the best opportunity to effect major cost savings, without sacrificing quality or aesthetics, is at the inception and/or planning stage. This is classically referred to as "value engineering." Value engineering which is distinctly different from "cost cutting" – means substituting like or better quality for a lesser price. It would startle the layman to know how often quality is upgraded while costs are being reduced.

The Construction Manager is paid a set fee for preconstruction services. For this fee, the Construction Manager also prequalifies the subcontractors as to ability, financial strength, reliability and past track record. Construction managers with full-service cost estimating departments usually maintain an extensive data base on current costs, local subcontractors, material, vendor delivery dates and minority business enterprises. Under CMR, if a subcontractor checks out to be marginal, the public entity has no legal obligation to allow him to bid work because the final contract will be by and between the Construction Manager and the subcontractor. The public sector owner will have a separate overall contract with the construction manager. In short, if the Construction Manager must utilize subcontractors, it is in their best interest to employ proven, reliable companies who charge fees that are realistic for the level of performance expected. The final decision on subcontractors, vendors, etc. is made jointly by the team (construction manager, owner and designer). Everyone's "buys in" to the composition of the overall team.

Prequalifying the subcontractors is probably the most important service that a Construction Manager can offer a client – particularly a public sector client. By law, under the hard bid process, any and all subcontractors have the right to participate. This means that the owner remains ultimately liable to the subcontractor (like the community college cited earlier) for performance failure by the contractor.

With Construction Management at Risk, selected subcontractors (in whom the Construction Manager has confidence) are asked by the Construction Manager to give a quote for services. This means that

the owner benefits “de facto” from the competitive bidding process without having to suffer all the negative effects of uncontrolled public bidding at the General Contractor level. Since the subcontractors will execute their contracts directly with the Construction Manager, the responsibility for overseeing the subcontractors work and approving payment requests is a primary responsibility of the CM. Because the construction process is a team effort (construction manager, architects, engineers, owners) everyone is aware of the status of every aspect of the project. The performance on a job by the Construction Manager is backed by a construction bond for the amount of the projected project budget. The construction management process of project delivery is participatory rather than adversarial. Cohesive teamwork and open communication make problem avoidance a primary benefit of this process.

Once all the selections are made and all the costs are on the table (including the CM’s fee for services) the Construction Manager drafts a Guaranteed Maximum Price (GMP) proposal in which all costs, fees, etc., are included. Also included is a contingency amount that the CM deems to be adequate to cover any anomalies or directed changes in construction, due to modification of the scope of work or hidden conditions. It is indeed an imperfect world and even under the most ideal conditions, not every factor can be accurately anticipated. This is particularly true in renovation and restoration projects. Hence, a contingency, if needed, is used as a project resource. If it is not used or only partially used, then 100% of the contingency amount remaining at the project closeout goes back to the owner.

When the subcontractors are prequalified and selected to submit a price quote, the last element of preconstruction services is to oversee the process of collecting, analyzing and evaluating the results for presentation to the entire team. Collectively, all appropriate decisions can be made.

Once a GMP is finalized, the Construction Manager takes off his cost estimator/advisor cap and puts on his General Contractor’s hard hat. At that point, the Construction Manager serves for the rest of the project as a conventional contractor, building the project in a safe environment, meeting all OSHA requirements, and delivering a top quality project.

Some may argue that hard bid is cheaper than Construction Management at Risk. The question to be answered is “how do you know?” With Construction Management at Risk, a client knows exactly what he is paying for each and every service. The Construction Manager has all of the responsibility for making the project a success and all of the liability. A construction manager’s fee is less than a conventional hard bid fee, and, what is perhaps more important, the owner knows exactly what they are paying for. Every activity and every expenditure is known to each member of the team. Doing anything short of producing a quality project does not positively change the construction manager’s remuneration, as it sometimes does in a hard bid situation. Cutting corners will not enhance a contractor’s profit under CMR. The construction manager’s fee is out in the open. The industry term for this is “open book job accounting.” With a hard bid methodology the General Contractor’s fee is buried in the bid amount. A construction manager’s contingency fund is known and the manner of disposition of the fund at project closeout time is contractually spelled out. A hard bid contractor’s internal contingency amount, or cushion, is not known to the client. The cost of a job is guaranteed in writing by a construction manager. A typical General Contractor provides a target price that eventually can be substantially altered through “change orders.” “Change orders” are modifications

in the original contract to adapt to changing project conditions and/or design modifications. Change orders, more often than not, result in substantial project cost increases rather than decreases.

Construction Management at Risk has been embraced by the public and private sector clients because of the control that it affords. The Construction Manager has more accurate information, early input, and most importantly, bottom-line responsibility for the overall success of the project.

Architects like it because it makes their project go smoother, stay in budget, and finish as a quality job that they can show to prospective clients.

Bonding companies like it because the Construction Management at Risk process exposes them to far less risk and less servicing.

Owners like it because they have the benefit of a guaranteed price, obtain the most value for the dollar expended, and the process is smooth, resulting in far less stress.

Vendors like it because the materials, systems, furniture, fixtures and equipment are value engineered early on in the design process enabling better handling of long-lead items.

Construction Managers like it because the selection process usually is predicated on qualifications and most of the good primary competition is known. In other words, marketing for CMR services is for the most part a level playing field. Also, Construction Managers like the process because they are in the design decision “loop” early where their expertise can be very beneficial to the architects and engineers charged with creating and effective building design.

The process provides a non-adversarial, participatory team environment and allows the Owner to establish a firm price predicated on quality standards set by the whole team. Simply put, “It is a better way to build.”

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