CONSTRUCTION MANAGEMENT KNOWLEDGE IN PREPARING AND RESOLVING CONSTRUCTION CLAIMS

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ABSTRACT: This paper discusses the role of construction management (CM) profession in claims management. It reviews the attitudes, psychology and practices relevant to CM knowledge. It is the purpose of this paper to highlight CM profession's knowledge in this area as this profession's core competence in contemporary construction.

Key words: Construction claims, dispute resolution, construction contract.

1. INTRODUCTION

Construction management (CM) profession makes the mistake in assuming that every other project participant sees things from the same economic perspective. It should instead always anticipate embracing conflicting explanations of the same event and try to come to terms agreed upon by all parties affected. Therefore, CM profession must emerge from the myriads of daily project repercussions and recognize the subtlety of events as they arise. Only through knowing how limited one's perspective can be that communications among project participants may be facilitative and effective. While it is not entirely possible to preclude any individual from taking a tunneled and self-interest view towards an event, it is always constructive for the CM profession to help to mitigate the discontent growing among project participants and to cultivate cooperative reciprocity between economic adversaries.

While disagreements among project participants may be ubiquitous, a construction claim takes root in situations in which contract performance becomes problematic due to either of the two assertions to which the opposite party opposes: (1) one party believes his duty of performance is excused or (2) one party believes his continued performance must call for a new consideration. A claim is therefore an assertion of right or a demand for due performance from the opposite party and may involve a request for additional compensation due to damage or expenses incurred in contract performance. On the flip side, the opposite party's assertion may be a repudiation to perform, a rejection to accept performance, or a revocation to the accepted performance.

There is no reason to believe that a claim will be met by a warm understanding by the opposite party, because it more or less presents a situation of potential impairment to contract expectation. To find out what the other party thinks, the performing party may submit a claim as a means to inform or to re-negotiate. Variably, construction managers may regard a construction claim as an ancillary project given rise by the physical project. As far as construction claims are not preventable, a contractor's profitability lies not only on the basis of a successful completion of the physical project, but also on the satisfactory resolution of the unseen ones, i.e. claims during contract performance. More importantly, CM knowledge is as relevant in preparing and resolving claims as in physical activities. In modern construction, the utility of CM knowledge in this unseen layer of business often is mandated and is indicative to the competence of construction managers.

This paper first reviews the stages of a construction project in which various types of claims may arise. It then examines the pertinent procedures of managing a claim from the perspective of legal practice. It further identifies critical issues concerning preparation and resolution of construction claims for which most practitioners without proper legal training or counseling tend to overlook or find bewildered. An array of CM practices is discussed in response to the potential pitfalls or confusions surrounding the task of construction claims management; and lastly summary remarks are given.

2. CONSTRUCTION CLAIM SITUATIONS

At the moment the contracting parties agree on the contract, an assortment of obligations become binding to both. The failure to fulfill any of these obligations will result in one party seeking redress from the other. The unpleasant side of a construction project is that contract documents are unsparingly voluminous and that parties may not fully appreciate the disparities in their understanding of them until a real conflict later ripens. A seasoned contractor knows the attention paid to taking heed of certain actions or inactions in the pre-construction stage can avoid unwarranted costs of claims and is well worth the buck.

Before construction is mobilized, the contractor would expend most of his effort in planning. In parallel to streamlining construction resources and scheduling activities, the contractor must not overlook certain defects in the contract documents and should immediately inform the owner of these "paper" defects after spotting them. Among a plethora of disputes in modern construction, the most prevalent have been fumed by an incomplete or ambiguous design. The underpinning idea is that the owner has an implied warranty to her design encompassing the plans, drawings and specifications furnished to the contractor [2], despite of that contract provisions specifically require the contractor to check all of them before bidding. On the ground of a defective design, the contractor, after partially

performing a contract, is considered wrongfully prevented by the owner from completing the project and is entitled to recovery for actual expenditures and the loss of profits. But there is one caveat which remains as the owner's prime defense. If the design defects are patent, which may not need special effort to identify them and an ordinarily prudent contractor would not have ignored under the like circumstances, the contractor may still be held responsible.

Likewise, before site work commences the contractor needs to investigate underground conditions and to examine potential discrepancies between the design and the actual site conditions. It should also make the best effort to flag any change of statutory or regulatory requirements subsequent to contract award which will take effect during the life of the project and impact the extant obligations of the parties. These statutory or regulatory requirements may incur hidden and uncontrollable costs to the contractor for which the owner may not want to reimburse the contractor very late into the project.

Another precaution to the contractor in the pre-construction stage is to distinguish risk-shifting provisions in the construction contract [3]. Since most of the contract documents are drafted by the owner and very seldom would the contractor be afforded the opportunity to negotiate the terms with the owner, it is only natural to witness such provisions to be inserted in contract documents in a diversity of ways. These provisions may specifically set limitations on owner's liability to the contractor even under the circumstances in which the owner may be culpable. In other situations, the owner may be excused of performance under exculpatory provisions for events which the contractor simply does not have control of. Still in other situations, the contractor is asked to hold the owner harmless by means of insurance indemnification. In any of these risk-shifting situations, the contractor has to be able to differentiate the liabilities, which is foreseeable at contract formation from those unforeseeable. The earlier such an issue is clarified with the owner the less a burden for the contractor to present a claim whenever it arises.

Partly due to the parties' inability to resolve design defects, ambiguities in contract documents and differing site conditions, to foresee statutory/regulatory impact to the project, or to clarify the boundary of risk-shifting mechanisms in the construction contract, there exist formidable barriers after construction commences between contracting parties to take proactive actions to avoid costly claims. As construction progresses, the design defects gradually ripen into a real issue. It is often the subcontractors who first encounter the problem. The work cannot proceed or has to pause before these design defects are resolved. The project management team cannot dictate the pace of construction from then on because the designer owes no obligation to the contractor for a timely response.

Similarly, when a differing site condition is discovered on site, it is patently too late to take any proactive action. Regardless of whether the contractor improvises a solution scheme on site, demands a design change from the owner, or seeks outside help, the outcome is more or less the same: the as-planned pace of construction will be interrupted, and low productivity soon ensues. The situation where the contractor incidentally learns that his construction planning or methods must be revised due to renewed statutory/regulatory requirements would produce no different outcome. Precious time is lost and parties must re-align their expectations in the contract before resuming their contract performance for the remainder of the project.

Perhaps, during the construction stage, the most devastating effect emerged from a claim situation is engendered from ambiguities relating to mutual obligations in the contract documents [2]. Since a changed site condition or any of the similar reasons will invoke a modification to parties' obligations, such ambiguities residing in the contract documents will effectively stall their ability to communicate and to follow the procedure to re-negotiate the contract. Without a clear and timely success in this front, the basis for negotiation would be precarious on which parties have no agreeable way to predict what the affected scope of work is and how the impacted obligations are to be duly compensated.

Invariably, the contractor's position is signaled by a demand for a time extension and a monetary recovery for additional construction costs and lost profits. By contrast, the owner's answer to it is tarred with a symbolic sloth and penumbra. The real difficulty lies in the question of whether there exists a clear procedural guidance in the contract based on which parties can and must follow to take necessary measures to mitigating the differences. Often times, the process of contract modification takes place on a rough terrain thru which parties struggle to clarify extant contractual ambiguities while attempting to resolve incoming construction claims simultaneously. The sheer danger is that parties may fail on both fronts. The prime reason for this is that, when the owner begins to realize a particular interpretation of a contract term will derive into liabilities in other ancillary claims, his tendency is to cling to the version that would fend off those claims. Evidently, the contractor after being balked from getting an amicable interpretation of the contract ambiguities would in turn be barred from being awarded a full recovery for his modified performance due to the changed condition.

After all, the contractor is an economic agent. Without profit as a driver, there is little incentive for the contractor to act responsively and responsibly. In fact, in a market of acute competition, performance without due compensation may be suicidal. Psychologically, the owner may have a tendency to make life more difficult for the contractor whenever a claim situation has been recognized. First of all, the owner is always reluctant to pay more for what she felt physically the same thing. In owner's calculus, the additional compensation being paid for a differing site condition only produces the same built facility. The owner neither gets more space nor stronger structural soundness. Secondly, one has to take into account the owner's suspicion that the contractor may tacitly compromise quality. A situation of information asymmetry puts the owner on a disadvantaged playing field to battle with quality deficiencies or quantity deviations. A claim may be frivolously manipulative and be purported to throw "troubles" into the owner's backyard. A third ramification is the contestability of contractor's data and information which substantiate a claim. Without third-party adjudication, owner's staff usually has difficulties to process the information related to a claim efficiently. The sentiment is that, if any of the owner’s representative acts overly lenient to the contractor, her integrity may be in

question. By contrast, loyalty may be shown if contractor's claim report is rigorously challenged. A final counter-productive trait is shown by the distaste to relinquish money too early and too fast. Admittance to a claim and in turn processing it will invoke just that.

From a contractor's standpoint, none of the above psychological traits of the owner's could be warranted [4]. The simple fact is that the contractor needs the capital to run for the project success. To the best of his conscience, the contractor is working for the owner's avail and should never deserve an inferior treatment. Thus a claim situation is often symbolized by mistrust, miscommunication and outright procrastination. The accumulated negative force in both sides of the contract works pointedly against team building and productivity. The direct impact of this is that the contractor never gets cost reimbursement in a timely manner, undermining his cash flow and profitability. In turn, this negative impact ripples to other aspects of construction, impairing contractor's interactions with the subcontractors/suppliers, exacerbating the turnover rate of workers and even site personnel, and diluting the attention of the project management. When more and more claims are being backlogged on owner's desk, subsequent claim situations likely become ineradicably antagonistic and complicated, as many of the claims are the derivation from owner's inability/failure to resolve the claims when they first emerged.

3. CLAIM PROCEDURES

Any effort to counteract this unfavorable chain of emotional events in a claim situation must begin with an understanding of the contracting process in construction. Quite clearly also, the purpose is not about assisting the contractor to maximize the chance of getting an equitable redress, nor to debilitate the owner's power to challenge a proposed claim. The central idea is to foresee a potentially adversarial relationship emerged from a claim situation at the earliest possible and to duly mitigate any subsequent development which proves counterproductive to both sides [3]. The inceptive step should be for both sides of the contract to appreciate the precept that a claim is basically an assertion of rights based on the contract, and that all construction claims are traceable to particular contract provisions. The place for parties to begin with is the contract itself.

In that, the most prominent provisions are those which expressly requires that any claim be submitted within a window of time before or after a specific event or condition. In addition, a notice requirement in relation to the occurrence of an originating event is instrumental to ensure owner's opportunity to a timely evidentiary discovery involving due investigation and verification of the claim related event.

Still in other contexts, there may exist a contestable condition subject to parties' interpretations linking to the question of whether a viable claim can be substantiated [5]. Typically, when a liability-limiting provision is inserted in the contract, there is always a preemptive disagreement concerning whether an originating event can be qualified as within the scope of a particular provision. This preliminary question has a huge implication. For example, in a situation of "no damage for delay," the preliminary question becomes whether the delay is reasonably foreseeable by the contractor. A "no damage for delay" provision cannot be applicable to situations where the owner is chiefly culpable, especially when such a delay would be construed as an outcome of wanton or deliberate act of the owner.

But the dilemma lies exactly at the fact that the owner must first confront herself with an admission to a culpable delay and thus granting the ground to controvert the liability-limiting provision [5]. Owner's good faith and diligence thus works against her own interest. A sensible contractor would expect little from the owner to act in ways as responsible and responsive as needed, when no owners are so motivated to act accordingly under like circumstances. One can thus regard such contract provisions as one not only to limit liability per se, but also to bar claims. These examples all boil down to attest the same conclusion: the parties, the contractor in particular, must understand not only how a claim procedure takes place literally, but also the psychological interactions over the course of performance in the construction contract.

A claim procedure necessarily begins by the contractor's recognition of the existence of potential claims before they emerge [3]. As illustrated earlier, this recognition can be retrospected to the pre-construction stage. Often times, simply pointing out the defects in design or ambiguities in contract documents to the owner before construction commences can be deemed an act of initiating a claim and is advantageous in claims management. This has the potential to prevent other related disputes if contract defects are resolved much later.

After construction work begins, the contractor must distinguish two patterns of claim situation. In the express claim situation, the originating event is an overt or purported result of an owner's act in the form of oral or conduct directives/instructions. It is unusual for a contractor to ignore a claim derived from an express situation. The only tricky scenario is when owner's directive/instruction first appeared entirely without prejudice to the contractor's cost or schedule, leaving the contractor effectively unmindful of its implication. Subsequently the time limitation on validating a claim may kill the contractor's entitlement to an equitable resolution out of the contract.

However, a more unsettling ambiance is felt by the contractor in a constructive claim situation [6]. A claim is constructive when a preliminary contest of whether a claim-originating event did occur permeates between the parties before a true claim situation can be formally given rise. Such a claim situation can be best depicted as different interpretations of the same contractual language are possible; but nonetheless one which calls for fewer obligations eminently controls or takes precedence over others, while the owner instructs the contractor to follow the interpretation which enumerates greater obligations. Without clearly understanding the practical meanings of that particular contract language, it is impossible for the contractor to recognize the underlying claimable situation, notwithstanding a runaway budget and a failing schedule. Even more subtle is the risk that the contractor's failure to raise a timely protest to the heightened obligations may amount to a consent over a conduct or the course of performance in a modified contract, which rightfully waives his redress

against the owner. This is more so when the owner's instruction is oral and the contractor never properly documents such communications.

After recognizing a claim situation, the contractor may want to inform the owner of preservation of a claim immediately. It can do so by utilizing a variety of project documents which will be discussed later. But the best practice is to submit a formal request for an equitable adjustment (REA) seeking compensation for costs or time extension as redress for an owner-caused event. At this point, the contractor should be well aware of the significance of preparing and presenting the claim. One caveat is that the idea of the notice to preserving a claim and that of a REA may not be interchangeable. While the former does intent to inform the owner of a claim situation, the contractor never specifies the intent to seeking redress. However, the latter meets a higher threshold by clearly holding the owner responsible. Understandably, a REA must therefore provide the causality, the scope of redress and the basis for redress enumerations. To the extent that preparing a viable REA shortly after a claim-originating event is feasible, the contractor would find preference to utilize the REA among many other options. Under other circumstances where an extended time to prepare the REA is expected, the contractor must treat claim preservation and REA submittal as two separate tasks.

After formally filing a claim against the owner, the contractor may anticipate to be asked to negotiate with the owner about the possible redress. Often, however, how well the contractor prepares and presents the claim will lure different responses from the owner. Understandably, a poorly prepared claim impedes reciprocity of understanding; and an ill-manner presented claim prolongs the process of recognizing the basis of the claim. It may be safe to say that preparation and presentation both works as the key to the door of good-faith negotiation towards an effectively filed claim.

Basically, claim negotiations can be characterized as either qualitative or quantitative. Qualitative negotiations are about the entitlement of the contractor to a claim, which concerns the justification of a claim based on the identified causes, liabilities and contract conditions. These negotiations are evidence-oriented of mutual exclusivity between parties. Quantitative negotiations are about the amount of compensation for the entitled claims. Such negotiations typically go into much detail and are time-consuming as there always seems more room to bargain. Thus, parties will manage to maximize their gains through their own resources available for negotiation.

Negotiations if ever take place are best started at a lower level between the parties. Since construction claims are mostly centered on facts, individuals who are empowered with authority of decision-making but are farther removed from daily routines, such as the project manager and the engineer, will join the negotiation only if the subordinates cannot solve the conflicts. If an agreement still cannot be reached with repeated attempts, the contractor may contact the owner in the hope that the latter directly intervenes in the negotiations and provides all necessary decision-making authority. Typically, claim negotiations must also compete with the project schedule. Parties tend to lose the taste for negotiations if negotiations dragged on until the final stage of the project. At this point, tensions between parties are too acute to allow room for good-faith dialogues. The owner is particularly inclined to withhold peripheral dealings for fear of giving the contractor any cause for time extension.

4. CM PRACTICE AT WORK IN CLAIMS MANAGEMENT- EXAMPLE OF CONTRACT AMBIGUITIES

Any agreement is only good to the extent enforceable by a court. Thus, writing is supreme in literally all aspects of claims management. Engineers, however, receive very little formal training in dealing with written documents. Most are neither required to cope anything beyond form reports in their career. Thus the task for a construction engineer to identify an ambiguity in contract document and to provide for a solution is not a typically easy one. It should first be noted that an ambiguity from a CM standpoint is distinctive to one from a legal perspective. Even the most experienced legal counsels are marginally equipped to scrutinize potential technical ambiguities.

Perhaps the center of gravity lies in the integration of drawings, quantity takeoffs and specifications [7]. Expectedly so, all technical information derivable from these three main sources should be complete, comprehensive, consistent and complementary. But this is always not the case. A good CM practice to start with is to ask whether these writings are a complete merger of all technical instructions and requirements. This is to vie against three major sources of outside "specifications," namely (1) parol evidence, (2) incorporation by reference and (3) course of dealings, course of performance and trade usage. Without an effective merger provision, the construction contract is a giant sponge capable of absorbing literally any technical material in the engineering community. In this case, there is no limit on how ambiguous the contract may evolve into.

A second recommendable CM practice is to know how and when an ambiguous contract may be interpreted against the drafter of the contract. To invoke this principle is to say that the drafter knows at least as good as the opposite. Thus, in most situations, the drafter can not claim the opportunity of entitling a favorable interpretation in a contract ambiguity. By contrast, the non-drafter party, reading the ambiguous contract differently, must receive reasonable protection against the drafter party.

In modern times, drafting the contract is almost an exclusive privilege belong to the owner. Thus the preliminary question of whether there exists an ambiguity in the contract may already be received as detraction to owner's competence. To minimize confusion or adversariality, the contractor must bear the burden to prove an ambiguity does exist and do so with the support of convincing evidence. Neither good-faith communications nor oral arguments would do a sufficient job. The CM people must demonstrate the probability that coexisting "interpretations" can be construed with the same writing. This showing need not be comprehensive. But the CM people must objectively communicate to the owner (1) that several interpretations of the writing are reasonable, (2) that they eventually boil down to different implications of time and money, and (3) that the contractor reasonably relied on one particular version of the interpretations when entering into the contract.

Also related is to distinguish ambiguities which are patent or apparent from those which are latent or not so apparent. The underpinning concept is that the contractor should bear the risk of patent ambiguities due to his duty to inquire before entering into the contract. Practically, the contractor would either know or did not know of the existence of a given ambiguity at the time of contract. If the contractor discovered but did not inquire into an ambiguity at the time of contract, he should be estopped in seeking a more favorable interpretation at a later time, even though this ambiguity happens to be latent. In other words, the contractor's failure to inquire adequately any known ambiguity may work as a forfeiture of substantive right in the contract.

For all practical purpose of claims management, it is atypical that a contractor would concede the knowledge of an ambiguity in the pre-contract stage, should he claim redress of it at a later time. In fact, most contractor-claimants would further argue that the ambiguity is latent in nature and that no reasonable bidder would have discovered a similar ambiguity under like circumstances. Thus, the critical issue here is not about whether or when parties have knowledge about the alleged ambiguity, but whether this ambiguity is so patent that the contractor must know or should have known when entering into the contract.

In real life, sorting out contract ambiguities is a time-pressure find-fault test. The challenge is to spot all potential loopholes in enormous volumes of technical documents and drawings well within a period no more than three weeks. The contractor has little hope to get a perfect score on this test. But any minor slip in the test would later emerge and claim a detriment. The most crucial CM practice is an effort to identify all patent ambiguities during the pre-contract stage by closely observing relevant judicial or similar opinions. It is imperative for CM people to keep track of these sources and to make use of managerial tools to minimize the likelihood to overlook contract ambiguities.

Even when the contractor successfully justifies an ambiguity, it is still relevant that on which version of interpretation did the contractor reasonably relied when entering into the contract. Alternatively speaking, the contractor may not entertain the version which no reasonable contractor would rely. To this aspect, it is powerful for the owner to raise an extrinsic reference to trade usage. If the contractor's interpretation is glaringly different from the named usage, he is under legal burden to prove that there exists another accepted meaning in the construction trade upon the ambiguous provision to which he reasonably relied. Essentially, the contractor may likely be arguing a "local" practice in contrast with a more general one. Clearly, a good CM practice is to ground this counterargument in a well prepared and presented fashion.

5. GENERAL GUIDELINES OF PREPAREDNESS FOR CM PROFESSION

5.1 CM Profession's Intra-Organizational Practice

Although construction claims can emerge under vastly different circumstances, CM people can prepare themselves to better handling them. First of all, a special effort must be paid to study standard form contracts, such as the FIDIC, AIA, AGC, or EJCDC, simply because of their general acceptability. Although few owners will strictly follow any form contract, the contractor saves enormous energy to learn of the unbalanced risks if he understands how the owner-drafted contract differs from any of the form contract. Similarly, form contracts are also used by governmental agencies. It is worthwhile for a contractor to incorporate the study of these governmental form contracts into regular in-house training.

When adjustments to standard form contracts are noted, the contractor must fully examine how any deletions or supplemental provisions are integrated into the agreement. In certain situations, a minor modification to a standard form would have overarching effect upon the entire contract documents. Therefore, each modification deserves a full session of analysis on its own right. This means a complete study of its implications on schedule, cost, safety and constructability.

Trade usage is the best friend of the contractor and provides him extraordinary protection. Internally, the contractor must make specific justifications, if a known construction practice is not observed when calculating a bid. Such justifications must be based on neutral expert opinions or scientific test results in a written form. CM people must carefully document them and anticipate utilizing them later against the owner.

Similarly, if the contractor is forced to make internal assumptions regarding the interpretation of a particular provision, CM people are obligated to raise the issue with the owner and resolve the question before the potential risks and costs become too high. The potential benefits to be gained even if the assumptions are correct are usually outweighed by the significant costs of a potential contract dispute. To exercise this task effectively means CM people must actively participate in all aspects of bid preparation and elicit such dormant assumptions from departmental barriers.

5.2 Psychology of CM Profession

Although obviously important, claim prevention may not be a worthy area of budget outlay from the standpoint of the contractor. In public works projects especially, layers of control and command within governmental agencies make pre-contract negotiations marginally relevant yet hugely time-consuming. In the post-contract stage, contractor's inquiries seeking to clarify contract provisions which have large-sum monetary implications are too corruption-sensitive to warrant a quick and clear-cut response from the owner. Even with due diligence, the contractor may find himself mired in lengthy paper wars over former issues while newly emerged issues overlapping the old ones. Yet in other cases, contractor's voluntary and good-faith disclosure of private information over a potential claim may later be used against him in third-party adjudication. Very quickly, the contractor will learn in the hard way that noticing and filing a claim against the owner is more realistic than preventing it in the first place. This situation signals the fact that parties have all the grounds to be pessimistic over a potential claim. It also sends a strong message to CM people that psychological sensitivity is pivotal in handling construction claims.

In any case, construction claims will infuriate the owner, regardless the cause and the form of redress sought. To avoid parties' collaborative bond becoming foul to the fact that the number of claims gradually increases as the project progresses, the contractor must strive to maintain effective communication with the owner throughout [4]. The role of the CM people is to act as the link bridging parties, even though they sit on the contactor's payroll. Specifically, CM people must ensure the contactor's communications to the owner are without confusion and noise. Any argument of right must be made in writing and be based on contract provisions. They should streamline all expressions in the form of clearly and succinctly presented facts and reasoning, point out the well accepted construction practices whenever relevant, and identify mutual grounds and possible win-win solutions to both sides [7]. The CM people will help exclude all forms of finger-pointing, particularly in the contractor's camp. They should always stay focused on matters which provide mutuality and reciprocity. They will also recognize that individuals representing each party come from very different background, and that any minor negotiation or discussion between these two groups of people must proceed incrementally. The CM people are the facilitator of effective negotiation meetings and always provide the agenda for parties to agree upon before the first statement is made in such meetings.

5.3 CM Profession's Diligence and Duty of Care

Engineers loathe paperwork, regardless they work for which side of the contract. This attitude is understandable but hugely detrimental to claims management. CM people must recognize site engineers' tendency to delay paperwork whenever there is an excuse. And memories do fail. Without sufficient evidence, the contractor has no successful claims. CM profession's worth is best evidenced when the needed records are duly presented in arbitration or litigation proceedings.

The CM people must insist on establishing and maintaining a good record-keeping system to identify and monitor potential contractual problems as they occur. This means they will challenge the site engineer's delinquency in providing written records when most fresh. This also includes having interviews from certain owner's personnel, taking interrogatories from eyewitnesses, gathering relevant public records, news clips and trade standards, and obtaining neutral expert opinions on specific subjects. Very often, the existence of contemporaneous documentary evidence detailing precisely the claimed situation is the key to efficient and successful claim resolution.

Another major role played by the CM people are to act as the watchdog of competence. In a construction project, signs of incompetence are omnipresent: letters are ignored, phone calls are unanswered, schedules are not timely updated and followed, unapproved change orders mount up, and subcontractor crews become evanescent. Finally the project grinds to a halt and everybody looks around and asks why. The CM people must be quick and bold to point out these signals and the potential negative effect. There is no reason to believe each project participant is rational in utilizing his time and resource. There is no reason to believe the project manager is fully aware of these signals of incompetence either. Ignoring these signals is refusal to permit the record-keeping system to function properly.

On the other hand, all construction projects are short of time, but engineers always make excuses for time extension. The CM people should warn of any project participant in one way or another who may contribute to breed an atmosphere of inability to construct the project swiftly. They similarly will challenge fundamental conservatism of so-called "traditions." Lamenting language like "we have never done it that way before" or "I would like to try it your way, but who will pay for it?" symbolizes an inability to profit from past experience by recognizing a change circumstance. They will alert the leadership to take responsibility in the most efficient use of the construction force. All this effort is simply a proactive measure in preventing any construction claim from being frivolous and wasteful.

6. CONCLUDING REMARKS

It is not realistic for a contractor to plan to avoid claims entirely, although it is feasible in theory. But this paper has asserted that an effort can be paid to minimize their occurrence and detrimental effects. CM knowledge in recognizing the claim situation, the claim procedure and relevant practices in claims management will help to prevent the quagmire luring in the unseemly. Evidently, this effort should be in accord with all aspects in construction planning.

Improved communications within the project team and contract documentation will contribute to equitable risk assignment, team building, and trust. This will facilitate crossing information barriers between parties when they begin to realize a conflict exists.

If resolving a claim can be deemed a mini project, this project is in sheer contrast with the physical one. For the latter, both parties gain in completing the project early. However, with respect to a claim, at least one side is unhappy with it to begin with. In modern times, the failure to properly handle construction claims often undermines the chance of project success. Thus, the CM profession must be aware of this development and be quick to embrace the relevant knowledge.

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