





**STEP 3: NOTIFY INTERNAL AND EXTERNAL PARTIES**

Notification is the third element in effective change-order management. It is both an internal and external function that is critical to identifying when a change occurs and the resulting impact. Notifying the project management/project control teams early allows them the opportunity to more effectively control costs and schedule impacts.

In addition, contractors need to adhere to the required external notification procedures, particularly time constraints. Prompt notice is generally a contract requirement, but even if it is not, contractors should promptly notify the owner of any conditions encountered, such as unforeseen site conditions, even if there is uncertainty whether a change-order request will be forthcoming. Lack of notice can be a strong defense for owners, and owners should be given an opportunity to seek the most economical course of action in response to a change. This is particularly true if the contractor encounters a constructive change or constructive acceleration. In this situation, the contractor should notify the owner, in writing, that the instruction is considered a change.

Finally, anticipate critical issues as early as possible because changes can be rejected solely on the failure to meet contractual time limitations. Internal and external notices should be sent promptly without waiting for quantification of time or costs. Timely notice and exchange of information promotes prompt change-order resolution.

**STEP 4: DOCUMENT THE CHANGE**

If profitability depends on the collection of extras or defense of claims and the claimant has no records, the world's best consultants and lawyers will be unable to create them. Or, if the records are in poor shape, the cost of compiling suitable information for the pursuit or dispute of a change order may be high.

A comprehensive documentation system provides the data necessary to obtain an equitable resolution when disputes arise. Proving the occurrence of events and causes of problems is a key element in resolving change requests. Negotiations may be held months or years after the work was performed, and those performing the work may not remember details regarding the specific issues or may not even be present during the negotiations.

Furthermore, courts and arbitrators tend to give more credence to contemporaneous written documentation than to testimony.

The discipline required for effective documentation requires the same type of management emphasis, instruction, repetition and follow-up that construction professionals use to ensure that equipment is properly maintained, safe working practices are followed and reports are submitted on time. Project managers should establish a minimum checklist of records for retention including:

- diaries;
- daily reports;
- project correspondence;
- meeting minutes;
- schedules;
- cost records; and
- photographs.

These documents should specifically cite if planned operations are delayed, prevented or changed in nature. Documents from the other party need to be reviewed carefully for accuracy, and errors or omissions should be promptly corrected in writing. Also, it is critical to have regularly updated schedules at various intervals to identify and quantify the schedule effects of a change.

The importance of accurate cost records cannot be overly emphasized, as contractors are generally required to demonstrate that they actually incurred the costs because of extra work, delays or disruptions. When extra work is identified and separable, the associated costs, including labor and material costs as well as equipment utilization, should be recorded under separate cost codes established specifically to quantify them.

**STEP 5: PREPARE THE CHANGE REQUEST AND DAMAGE CALCULATION**

Different types of changes require different types of supporting documentation and analysis. Change requests should follow the contract requirements and be prepared in a neat and organized manner. Additionally, change requests should effectively use graphics and numbers to communicate information to the intended audience and establish a link or cause-effect relationship between the entitlement and the damages. Requests should include the following elements:

- factual history with key documents and correspondence;
- entitlement utilizing contract provi-

sions, industry standards, legal statutes and equity concepts; and

- damages utilizing various calculation methods.

Using key documents and correspondence is helpful in establishing a factual history regarding the change. Creating a timeline of events or using the project schedule, if possible, is also advisable. It can illustrate the events leading up to the change as well as any events occurring after notification of the change.

A common weakness in change requests covering complex issues is the absence of provable linkage between the causes of claims and their effects. Knowledge of the contract is invaluable in establishing entitlement to damages, and reference to applicable industry standards can strengthen the entitlement. Thus, adequate preparation is important to achieve optimal results.

Different methods are used to calculate damages. Change orders may be priced by a contract agreed-upon lump sum price or unit price. If changes are to be calculated by unit prices and the estimated quantities have significantly changed, then the contractor may be entitled to a price adjustment for the performance cost increases. However, the contractor needs to prove that the nature or character of the work significantly changed.

Delay damages are another change order option and generally require a schedule analysis to prove delay periods and associated entitlement. Compensation may include a schedule extension, extended general condition costs and home office overhead, idle equipment costs and escalation. In addition, the contractor may assert consequential damages such as lost profits on other work.

Productivity loss calculations, another form of damage calculation, address manpower overruns associated with overtime, scope change, poor site conditions and other construction labor interferences. Productivity losses can be calculated utilizing industry studies as references; internal productivity/manpower records; or the court-preferred method, the measured mile. The measured mile calculation compares the production rates of an “un-impacted” time period to an impacted time period for the same work activity. The un-impacted time period serves as the baseline to determine the productivity loss for work that was inefficiently performed.

Two additional damage calculation methodologies are “total cost” and “modi-

fied total cost.” With total cost, the contractor claims the entire cost overrun as the consequence of the changed condition. For the contractor to assert total cost, it should pass a validity test: the contractor’s costs are accurate and reasonable; the contractor’s bid was reasonable and contained no errors; the contractor was not responsible for the cost overrun; and no other way exists to reasonably calculate the contractor’s damages.

The modified total cost approach is used when the total actual cost incurred on the project is less than the estimated cost to perform the job under expected circumstances, or the contractor needs to adjust the difference for any of its own faults on the project, such as a bid error or faulty work.

#### **STEP 6: RESOLVE THE CHANGE REQUEST**

Resolving the change request is perhaps the most frustrating. For cost benefits, both parties should strive to resolve the change request at the negotiation level, as arbitration and litigation are expensive and time consuming.

One of the most important decisions in negotiation is deciding who will attend. Depending on the parties’ current relationship status and ultimate goals, owners and contractors need to decide between utilizing the project management team, company managers or outside consultants.

It is more important, though, to enter the negotiations with the right mindset. Each party needs a member who knows how to effectively present the position or identify incentives or needs for the other party. The negotiation team should be aware of the situation from a factual, financial and legal standpoint.

Furthermore, patience is critical, as the negotiations can linger for weeks, months or years. Members need to deal with roadblocks, such as the opposing side not having qualified or prepared representatives present. And, finally, if settling the dispute is the number-one priority, then both parties need to be willing to compromise.

If these steps are implemented in a timely manner, the parties are more likely to resolve the changes during the project as opposed to during mediation, arbitration or litigation, which is the most costly option for all parties involved.

---

**Molly is a senior consultant with Interface Consulting International, Inc., Houston. For more information, call (717) 626-2525 or email [kkmolly@interface-consulting.com](mailto:kkmolly@interface-consulting.com).**