

# Chapter 3

## Clarifying Contract Change Orders

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**Construction Claims Management**  
**CEM - 591**



# Outline

- Who's Who : Architect and Engineer
- Change order compensation
- Change order finalized
- Notice requirements
- Cost monitoring
- Design/Build change orders
- Phased construction
- Design/Matrix change orders
- Named subcontracts
- Questionable work

# Who's Who : Architect and Engineer



- The two major professions within the design disciplines are the architect and the engineer.
- Architecture is, in essence, the pursuit of the art and science of habitat for man in his environment, where as engineering focus on the study of the single technical area such as structural. geotechnical, mechanical etc.

# Architect and Engineer contd..



- Architectural services usually extend beyond the design and the production of plans and drawings. Upon approval of plans and specifications, the architect incorporates his design into package of articles termed as contract document.
- The architect assists in the selection of a bidder and in essence, becomes the agent of the owner, this is called agency of representation.

# Architect and Engineer contd..



- The major distinction between architects and engineers runs along generalist and specialist lines.
- Both these design professionals must have a thorough understanding of their liability in errors and omissions that lead to construction claims.



# Change order compensation

- There are two scenarios to be visualized during the construction of a project
  - Work being completed without interruption
  - Work all over again with additional scope, rescheduling, payment disruptions etc.



# Change order compensation contd..

- In the second scenario all extra cost items are classified into *three categories*.
  - Direct cost ( labor, materials etc – The hard Costs)
  - Indirect cost ( home office, lost profit – the Soft costs)
  - Consequential cost ( interference, disruptions, rescheduling)

These are part of contract elements that sum up the maximum possible compensation allowed by contract change order.



# Change order compensation contd..

- There are typically ten reasons for change orders called as adds and deducts.
  - Design errors
  - Changes in market conditions
  - Changes in owner's requirements
  - Uncovering of undisclosed existing conditions
  - Uncovering of unknown existing conditions
  - Suggestions to initiate better, faster and economical construction





# Change order compensation contd..

- Change in designer preference
- Discrepancies in contract documents
- Change in external requirements
- Final coordination with N.I.C ( Not in contract equipment)



# Change order compensation contd..

- Most change orders apply to one of the three distinct categories:
- Owner-acknowledged change orders
  - This is the most common category of change order that will be incorporated in the owner's budget and will present the least conflict.
- Constructive changes
  - This occurs when the owner or his or her authorized representative acts in such a way that causes a contractor to perform additional work.



# Change order compensation contd..

- There are seven categories of constructive changes
  - Changes in method of performance
  - Misinterpretations of specifications
  - Defective specifications
  - Over inspection
  - Rejection of “or equal” submissions
  - Defective specifications
  - Defective owner-furnished property or equipment



# Change order compensation contd..

- Consequential changes
  - This is similar to constructive change. It differs in that it is additional work that becomes necessary or additional costs incurred as a direct result of some usually more obvious change. It is the result of a domino relationship of cause and effect.
  
- Concessions made by the contractor in these change-order categories must be based on the reality and should follow certain basic rules of concession.



# Change order Finalized

- Accurate documentation is absolutely necessary for the changed work, whether or not the change order has been finalized at that point.
- First consideration is to maintain a comparison of actual costs versus estimated costs.
- Whether the work is proceeding on a time and material basis or a change has not been finalized for any other reason, precise documentation is the rule that must not be compromised.



# Change order Finalized contd..

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- Whether or not the change has been finalized, it is important to realize that the documentation of the *indirect* and *consequential* costs become even more important to proving a construction *claim*.
- To accomplish these objectives ( documentations), a good cost accounting system and good schedule documentation management must be in place.



# Notice Requirements

- Not all change order proposals are claims until they are refused by the owner, it is wise to make every effort to meet dispute resolution clause that may exist in the contract document.
- Notification can be a *double edged sword*. If you strictly follow attorney's advice on structuring the letter of notification it will appear as if you are ready to haul the owner into court tomorrow.



# Notice Requirements contd..

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- In this case the relationship may go adversarial, and away from an important level of trust.
- On the other hand if contractor fears offending the owner, then the contractor can maintain good relations. The balance, then, lies in the ability to formulate *effective communication*.





# Cost Monitoring

- The contractor must monitor project field service costs during the project.
  
- Field costs are the function of
  - Size and classification of labor forces
  - Field office overheads
  - Material and supplies
  - Support services from home office
  - Vehicle lease and fuel charges
  - Corporate, general and administrative costs
  - Consultant or contract services
  - Job profit



# Cost Monitoring contd..

- By tabulating the monthly accumulation of the budget and actual field service costs on a time versus cost chart, a plot similar to S-Curve is obtained
- This plot is used to make visual comparison of the status of the contract, change in trend toward either a saving or a cost overrun.
- To maintain this plot, regular inputs are required from the subcontractors and for which prime contractor should make arrangements.



# Design/Build Change Orders

- Design build has become prominent in the last decade wherein the owner contracts with the designer/builder.
- In this the designer and builder are the same entity and the advantage from a production stand point, is its speed of project completion, as this method uses phased construction as its production basis.



# Design/Build Change Orders contd..

- Adding pre commencement activity and events timing control to the project production gives the owner the ability to jump start the project called fast track design/build.
- In fast track design/build the perspective bidders cannot be given a detailed set of plans, as design is not yet complete. So builders, bid by square footage costs or by cost plus contracts.
- This often leads to missed or ambiguous tasks that in turn generate *change orders*.



# Phased Construction

- In a phased construction, components of the project are started prior to the main project commencement.
- The big advantage to owner is that the production of essential components can begin before the total design of the project is completed, thereby incurring less interest cost.
- In this type, the construction can begin with certain activities completed and ready for initial draw progress payments from the bank's construction loan funds.



# Phased Construction contd..

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- The project is completed sooner, the owner has income from the capital project sooner, and the construction loan is paid off sooner.
- The economic advantage of the phased construction is the cost control over the selected paths of critical activities running in series and parallel to the schedule.



# Phased Construction contd..

- Responsibilities for completion of:
  - Project design and specification depend on architect or design professional
  - Modular components, long lead item procurement, and construction activities on the builder
  - Production schedule development and tracking on the owner.
  
- Mutual cooperation between the *design professional*, *owner*, and the *builder* is essential throughout the project in phased construction.



# Phased Construction contd..

- One of the main difference between the phased construction and standard one is the handling of component construction.
- In phased construction, preconstruction input by the builder and the owner team begins while the architect is still in the design phase, to prevent design changes later in the schedule.
- For a phased construction schedule to be viable, the plans and specifications need to be 30 to 45% completed before the project schedule is developed and executed.





# Design Matrix Change Orders

- In *Design Matrix Networking* specialized production designs are grouped in phases and activities, then utilized in number of project-oriented configurations.
- This is the most sophisticated high end residential construction design system.
- This is a highly responsive and event oriented operations system, producing a design network that will interface through the divisional factors. Thereby reducing time to manage multiple production schedules.



# Design Matrix Change Orders contd..

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- Design matrix networking requires manufacturers and builders with good communication skills and a commitment towards quality.
- Missing or inadequate specifications are the root causes of change orders in this area.



# Design Matrix Change Orders contd..

- Prospecting for the potential design matrix change orders include
  - Tasks to be performed
  - Time in events
  - Exact specs of materials and equipment
  - Long-Lead times
  - Job logic sequence
  - Optimistic and pessimistic completion time.



# Named Subcontracts

- Named subcontracts, or owner-selected subcontractors, describe a special procedure for subcontract selection in which the subcontractors are directly handed to the prime contractor by the owner.
- This arrangement serves the owner by providing the maximum advantage in competitive bidding.



# Named Subcontracts contd..

- Owners use this approach generally for two reasons
  - To reduce or eliminate the practice of “chiseling” the subcontractors by the prime contractor.
  - The second reason is an attempt by the owner to exert some control over who will be performing what work, as well as the contractual provisions that will govern them.



# Named Subcontracts contd..

- In this case there is serious difficulty for the owner, as all this owner activity removes the prime contractor's responsibility for the respective subcontractor selection to a very great extent.
- The simplest kind of problem that can develop is when the lowest bidder suddenly becomes unavailable, and generally it will be straight forward for the prime contractor to secure a change order that will be replaced by the next lowest bidder.



# Questionable Work

- This is a document designed to notify the owner by the prime contractor, that by all appearances, the work in question is not apparently included in any of the owners subcontract scopes.
- In this scenario the prime contractor runs into undefined work by a specific contractor and if this occurs the prime should submit a letter to the owner regarding responsibility determination for the questionable work.



# Chapter 4

## Project Schedule Claims