SCOPE OF WORK CHANGES

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GENERAL

It is generally accepted that construction documents may lack perfection and may be subject to different interpretation. This section deals with scope of work changes; differing site conditions and schedule impacts will be discussed in separate articles. (*See the AIA and Federal Changes Clauses at the close of this article)* The determination of whether there is a valid compensable change will depend upon many circumstances, including the type of contract, whether commercial or federal, rules of interpretation and such mundane issues as whether or not there has been timely notice. It is important to read the Article on Contracts and Risk Shifting prior to this artile. For example a performance specification imposes a much greater risk on the contractor than a prescription specification; and in either case a disclaimer or exculpatory clause may again transfer risk to the contractor that rally rightfully should belong to the owner. Mechanisms must exist to enable changes to be initiated and implemented with minimum disruption and delay to the construction process. And a bit of advice to all the parties, construction is momentum driven and changes and decisions must be made in such a manner as to have minimum impact on the momentum of a project.

But at the outset, let this be fair warning to the owner, designer and contractor: changes and often the decision making delays that tag along with them, may change work flow, duration of the project, and quality as well and have a substantial impact on productivity. As will be seen there are two potential elements of cost of a change; the first is the cost of the direct work added or deleted by the change, and the second which may be more substantial is the impact to other work and schedule consequences of the change. And sometimes the owner (government or otherwise) is without funds for both the change and/or the impact of the change. Often the owner has not adequately considered a reasonable amount for contingency or figures that it can escape such cost through unreasonable risk shifting techniques. The consequences of adversely affecting momentum will be discussed in a separate article.

The *mechanisms for discovering potential changes* in the contract documents are set forth below. These are important points in the process for one or all of the parties to exercise 20/20 foresight to pick up a potential problem and get it resolved on a timely basis such that its impact will be minimum or non existent. A vital part of project management is the need to exercise such vision to protect the integrity of the schedule and the budget. And the *mechanisms* are all steps in the process of every construction project.

Pre-Bid

- Constructibility Review by Design Team (required by AIA D200)
- Contactors' reviews during the estimating process. Clarification requests
- Pre-bid site investigations
- Value engineering proposals by contractors
- Pre-bid conferences
- Addenda to contract documents

Post Award

- Pre-construction conference
- Desk top reviews and RFI process
- Value Engineering Process
- Submittal cycle
- Duty to find problems in the office and not in the field
- Issues discovered in coordination drawing process
- Preparatory phase of the three step procurement process
- Inspections and test results which reveal discrepancies or need for change
- Equipment changes due to state of the art improvements

TYPES OF CHANGES: There are several types of changes: A **Formal Change**, a **Construction Change Directive**, a **Constructive Change** and a **Cardinal Change**.

Formal Change.AIA A207, Article 7.2 pretty simply sets out the terms of the **Formal Change** is a bilateral agreement by which the parties agree on the scope of the work, the price and perhaps the schedule (although in many cases the contractor may reserve its right to evaluate later on whether its schedule has been impacted by the change.

> "7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect, stating their agreement upon all of the following:
>
> 1. A change in the work;
> 2. The amount of the adjustment in the contract sum; and
> 3. The extent of the adjustment in the contract time, if any;

The Federal Government clause is similar as to formal changes and is set forth in **FAR** as follows:

> "The Contracting Officer may, at any time, without notice to the sureties, by written order designated or indicated to be a change order, make any changes in the work within the general scope of the contract, including by not limited to:

1. Specifications and drawings
2. Manner of performance
3. Government furnished facilities
4. Directing acceleration in the performance of the work

. . .and the contractor will be entitled to an equitable adjustment for effect thereof.

The changes clause requires a **written instrument**. The contractor is acting at its peril if it performs work based on a verbal directive. (If a verbal directive is given, and the contractor feels obliged to perform the work in the best interest of the project, the contractor should write a letter to the Owner stating that it has received this verbal directive from a representative of the Owner, with the specified statement of work and ask for confirmation immediately that the Owner is in agreement with this course of action; and that a proposal will be submitted for the cost of the work and any productivity or schedule impact that may occur. The standard flow or process for a formal change is:

- A reason for a change is initiated (whether by the Owner, Designer or Contractor through a Request for Information) The contractor should have an RFI log and Change Order log to be able to track each throughout the system. The contractor should immediately put an RFI that may have schedule implications into the system so that it can be tracked on the CPM. It may be that until there is a response to the RFI certain schedule activities will be delayed or impacted, so these should be tracked. When the RFI is converted to a change order, the change order should be added to the schedule as well as to any impact to the schedule of values. The RFI, if significant, can have a real ripple effect throughout the project, including submittals, acceptance requirements and so on, so it must be dealt with expediently and fully tracked as to down stream consequences.
- Generally a Request for Proposal is then issued by the owner requesting the contractor to submit its price and schedule impact, if any. **The Owner normally wants a total package, without any reservations (forward pricing we call it). This includes any proposed adjustment to the contract schedule and contractor's estimate of delay damages and impact to labor productivity. The Owner wants forward pricing and not paying actual cost after the work has been performed. The contractor may be reluctant to do so, being concerned that it may be difficult to truly forecast labor productivity impact or schedule impact.** The contractor may need to evaluate the change in respect to its potential impact on the project before deciding whether to provide a proposal which encompasses total potential cost, including labor and schedule impact, or if it feels that it should proceed cautiously, and reserve rights to schedule and labor impact for later discussion. For example, if the contractor has been experiencing a multiplicity of changes, it certainly needs to make this evaluation. If the project is in an

acceleration mode, or the work flow has been drastically changed by other events beyond the contractor's control, it may be very difficult to individually fully price this particular change on its own merits.

- **A word to the Owner: You want forward pricing but when the contractor provides an estimate, often using industry studies for impact, overtime and the likes, you accuse him of inflating the cost of the change. Forward pricing is an estimate, and as such it should be based on the best data possible and often that data is a NECA or MCAA or COE study. So if you want forward pricing and mean it, develop an approach at the outset of the project for pricing (units, factors for various levels of impact) or be open to other reasonable approaches for using a crystal ball to determine the full effect of a change.**
- **A word to the contractor: Really evaluate the change as there are two or more potential impacts of every change: the changed work itself (adding the light fixture), the unchanged work (creation of congestion for other trades, as an example) or the effect on the schedule (work flow and sequence as well as duration)**

- The contractor should disseminate the RFP to all subcontractors for review. The particular work may not directly affect one of the crafts, for example, but it could have an indirect effect. For example, a change to the electrical fixtures in the ball room may have no specific application to the painting contractor (it will be required to paint not one more square foot of the ceiling) , but it could cause it to perform work out of sequence or at a later time zone. Failure to inform the subcontractors of these changes may open up the general contractor to liability later on. At the least, the failure to do so leaves the subcontractor in the dark as to scheduling and planning issues that result from such changes.
    - **A word to subcontractors. The construction schedule is actually for a purpose other than covering the bare spot in the construction trailer. Review the sequence of work and analyze how a given change may affect your sequence, your work flow, the conditions for performing the work. You will at least be better prepared in planning your work, participating in subcontractor meetings. And subcontractors should request in their proposal letters that all RFIs and Change Orders be passed by them for review.**
- The contractor should price the RFP as quickly as reasonably possible. If not, and the project is delayed due to the issuance of the change, the owner may claim that untimely issuance of the change order was because of the contractor's dilatory pricing. But what if the owner is issuing multitudinous changes and it is very difficult to keep up with them? Well, you do your best but write the owner and explain the reasons you are having a difficult time keeping up with the pricing is because of the numerous changes being issued This may also lay the ground work for a cumulative change impact claim

later on. Do not give the owner a reason to complain of your performance because you failed to give notice. Which also brings up the point that the contractor should provide as fully as possible all reasonable pricing support for the change. The contractor has a duty to support its pricing as well as any claimed impact to the schedule, all of which will be discussed in the Pricing Section. The contractor should price the change fairly. The tendency by some contractors to inflate the pricing of changes is ultimately counterproductive the same as the tendency of some owners to try to "knock down" the contractors pricing just for the sake of doing so. Unfair pricing and owner tactics to try to avoid reasonable payments breaks down trust on a project and has unintended consequences which are not in the best interest of project success.

  - **A note to all the parties. Studies have shown that projects highly characterized by TRUST generally are the most successful ones. We have found that trust is most often broken (in the minds of all the parties) in the change order process, with often the contractor trying to get something it is not entitled to or overpricing changes, or the designer attempting to escape an error and omission issue, or the owner trying to escape accountability. Trust lost is seldom regained and the consequence is often a negative effect on every aspect of the project.**

- The negotiation process should be a two step scenario. ***The first step is fact finding***: in other words, to discuss the scope of work to assure that it is mutually understood for often the reason pricing gets bogged down is because the two parties are not in agreement on what the scope of work really entails. For example, is the contractor giving credit for deleted work as a result of the change; is material handling affected; will the sequence of work change (See Pricing Section). It is only after there is clarity and agreement on the statement of work and means and methods to achieve it, that pricing negotiations can really be meaningful. The second step obviously is the negotiation regarding the pricing of the changed and unchanged work.
  - **A "was/now" matrix is very helpful as will be seen in the pricing section. On the "was" column, a bullet summary of the contractual requirement prior to the change; on the "how" column, the elements of work that must be now performed and those deleted. This can become the pricing statement of work and presents very clearly the elements of new work and the elements of the unchanged work to which the contractor is entitled to compensation.**
- The contractor should take very detailed notes of the negotiation. Although a subsequent bilateral change order can not be changed by oral evidence or what was said in a negotiation, the minutes of those negotiation sessions may help explain the intent of the parties in the event a dispute occurs. A change order is an accord and satisfaction, that is a little contract on its own. It is not available for later negotiation if the contractor realizes it made a bad deal or the owner sees that the contractor is

making a bundle off the negotiation. (For the most part although there are certain exceptions to be discussed later.)

- **Under the parole evidence rule a contract must stand on its own two feet, but if there is a real need for clarification, the parties may go outside the contract for information which will help explain the intent of the document. The contractor's estimate, meetings of meetings and negotiations may be used for this purpose.**

- If there are exceptions and reservations, the contractor should set forth those very clearly in its letter confirming the negotiation. Remember, as stated, a change order is an accord and satisfaction**. It is a completely new contract and cannot be reopened generally**, **unless there is a reservation of rights incorporated in it do so**. If the schedule impact has not been negotiated, say so in the transmittal letter of your revised proposal and also that you intend to pursue this when it is practical to do so and at least reference that letter in the change order document when you execute it.
  - **When the contractor has a reservation of rights on the change order, sometimes the owner may refused to honor a pay request or claim that the contractor is in default because it has failed to honor a contract provision requiring it to price the change and all impacts. And sometimes the owner tries to trap the contractor into executing pay requests with waivers of all claims that may exist. It is helpful if such issues are discussed at a partnering session or at the project kickoff, and it is very helpful if some form of partnering exists for the principals to get together and resolve such issues with need for counsel. If this does not occur, see the best construction lawyer in your area, review all the contract language and the state legislation regarding prompt payments.**
- If this is a federal project, remember that for changes over a specified amount, the contractor must certify the validity of its claim both as to entitlement and quantum. The government takes this certification very seriously and there are many ex-contractors who failed to do so. There are also some ***ex***-lawyers and consultants who fell into the trap of trying to help a contractor get something that it was not entitled to. Remember also that the government has the right to audit these change orders years from the time of the negotiation and if there are costs included which would not be allowable, then the government can claw these costs back. Such requirements exist in some state procurement statutes as well.
  - **Even in what appears to be a local or state project, there may be federal funds and certain federal requirements incorporated in the construction contract. And often the right to audit is one of the requirements. For a contractor doing work with the federal or state agency, it will be good advice to make sure that it has a construction CPA which is familiar with DCAA audit procedures and the FARs relating to cost principles. But the same is true for contractors performing cost reimbursement contracts**

in the private sector as countless disputes arise over what is considered an allowable item of cost, some of which will be discussed in the section on Types of Contracts.

- And if this is a federal project, remember also that the contracting officer is of limited authority. That authority is expressed in a warrant which will set forth the limits of that authority. If for example, the contracting officer and the contractor agree on a $50,100 price and it is incorporated into the change order, but the contractor's warrant is limited to $49,000 the entire change order is null and void. Ask the contracting officer for a copy of his warrant at the beginning of the project.
    - **The same may hold true in the state or local government sector as well, and unless a designer has specific authority to direct a scope change, the contractor may well perform such a direction at its own peril. It is simple enough for a contractor and its staff to fully be aware of the authority and limitations of authority of the parties on the project and to perform any extra work only when directed by a representative of the owner who is duly authorized to do so.**
- If the general contractor's proposal contains prices submitted by subcontractors and if those prices are agreed to by the Owner the contractor may be in violation of deceptive practices rules in its state by not paying to the subcontractors the amounts agreed to in negotiations. It is always best to get the agreement of the subcontractors to any reductions made during the negotiation. Again, an important reason to maintain detailed notes of those meetings and attempt to obtain buy-in from subcontractors on any adjustments to their submitted prices.
    - **If a federal project, the general contractor is well advised to scrutinize the subcontractor's proposal to assure it is consistent with the principles of Truth in Pricing and to demonstrate through documentation that it has done so.**
    - **The general contractor may be in a position that the Owner refuses to accept the subcontractor's proposed price and denies it in its entirety. In such a case, the general contractor may be able to negotiate a pass through arrangement with the subcontractor, allowing it to carry its own water with the owner in the dispute process. The issue of "pass through or liquidation agreements" will be discussed in the article on Subcontract Management.**
- Once the change order has been executed, it is prudent to:
    - Add to schedule of values
    - Add to the construction schedule
    - Discuss in project meetings
    - Incorporate in purchase orders if applicable.
    - Set up separate cost code to track cost if applicable.
    - Bill monthly against progress.

- Field personnel track the changed work if possible against cost code and in daily reports.

- Often owners do not pay for changed work on a timely basis. Check the payment clause of your contract and exercise any rights you have thereunder. Give written notice. And a common procrastination of contractors project managers is definitzing and billing for change order work. Change orders can have a huge impact on cash flow so dereliction in managing the change order process can be have serious consequences.
    - **A word to the owners: You are the bank, not the contractor, at least as to the cost within the contract scope, including change orders. Want to hurt productivity? Good. Don't pay on time or find unjustified reasons to withhold funds and a money back guarantee that you have hurt the successful outcome of the project.**
- If there is no agreement as to schedule and/or labor impact in the change order but the contractor has reserved the right to do so , the contractor must now be careful of certified pay requests forms which often will provide that the contractor certifies that the cost in this pay request includes all work and all claims and disputed work and waives any right to claim for such work in the future. BEWARE of those provisions. See a good and experienced construction attorney. At the very least, take exception to this language when submitting the pay request. If the owner then refuses to honor the payment requested until the exception is deleted check out the payment clause and the local statute and invoke your rights if a respectful discussion with the owner is not satisfactory. As stated, the owner is the bank, not the contractor!

CONSTRUCTION CHANGE DIRECTIVE

Article 7.3.1 of the AIA A201 document provides that the owner can issue a change directive to the contractor in advance of any agreement as to price or schedule. FAR section 52.243-4 is fairly similar.(Both clauses are set forth as attachments to this article.) This is a unilateral directive to perform and must be complied with by the contractor, even if the contractor disagrees that the work directed is within the scope of work of the contract. Whether the government or the private section, the owner has this right to provide unilateral direction and the failure to comply is a breach of contract unless it is in the unusual realm of cardinal change. Under both clauses, the contractor has the right (and duty) to give written notice that it intends to seek additional compensation and then submit a documented claim for time and money to the extent applicable. It is imperative that **timely notice be given (each contract has its own notice requirements so make sure it is complied with).** Again, set up a separate cost code and collect cost (under the AIA there may be a lump sum adjustment or a time and material type, meaning as to the latter it may be difficult to demonstrate labor impact without detailed field documentation) and track on the construction schedule as well.

The unilateral directive may relate to a disputed scope of work, or work the contractor may claim has been wrongfully rejected by the owner's inspector. It may be issued when there is no dispute that the work set forth in the directive is out of scope but there is not yet agreement as to price and schedule impact, and the owner issues the directive to keep the momentum on the project. Let's assume that the owner agrees that the work is extra for which the contractor is entitled to extra compensation and save disputed work for the following discussion of Constructive Changes. These would appear to be fairly easy to resolve but are not for the following reasons:

- In many cases, the full scope of work has not yet been flushed out when the CCD is issued and often more clarification is required as the work gets underway. Ambiguity is the death of productivity, resulting sometimes in stop and go, or the need to do corrective work once the full scope is understood and directed.
    - Often the contractor will inform the owner of its interpretation of the scope of the direction and request authorization to proceed in accordance with that scope. But at least the contractor should inform the owner as quickly as possible of the shortfalls and ambiguities of the scope of work in the directive and request clarification or direction. However, the contractor should be very careful about sitting on its duff doing nothing; the contractor has a duty to comply with these directives to the best of its ability or be in breach of contract. Maintain daily records of costs relating to this work in a separate cost account. If there are materials that are difficult to split between the basic contract work and the changed work, use and document your judgment for a reasonable allocation. Have the owner's representative sign time and material tickets.
- As the scope of work is in fluidity, often so is the schedule. How do you plan for this work, how is the schedule and when is the schedule updated?
    - Obviously the directive should be added to the schedule. Some things are definite: the delay in work caused awaiting a directive, for example. Any effect that is occurring as to work flow and possibly equipment delivery. Get as much specific information as possible and provide a "conditioned upon schedule", that is this update is conditioned upon the following events occurring as specified. Maintain daily records as to schedule impact. Make sure the subcontractors are all on board.
- And if the parties cannot negotiate a lump sum, has the contractor maintained the required field documentation records to support its price.
    - Maintain field documentation, a separate cost code, adjustments to the schedule of values, and have those time sheets signed off by the owner's representatives.

CONSTRUCTIVE CHANGES

Often the Owner directs the contractor to perform work it considers to be extra work. The Owner disagrees, arguing that the work is in the contractor's original scope. When the work is disputed for whatever reason, or the Owner directs the contractor to perform extra work and does not use the change order process, then perform it the contractor must. If the contractor's interpretation or position is correct, then it will be entitled to an equitable adjustment under the concept of Constructive Change. In other words, by construction of the contract or a "change by implication" , the work is considered to be extra to the original requirements. **BUT, the contractor must give written notice within the time limits of the contract, support its position as to entitlement and price and schedule impact.** The contractor always has the duties of supporting its position as to three aspects of every request for additional compensation: entitlement, cost and causal relationship between the two. Again, the contractor knows the drill: give written notice, set up a cost code , impact on the schedule, track the work on field documentation, get the owner's representative to sign off on time sheets (not agreeing with the entitlement issue but that the labor was performed that day for that activity.)

Most constructive changes emanate from interpretation of specifications, issues of error and omission, inspection issues or the owner directing the contractor's means and methods. Changed condition disputes provide their fair share of constructive changes as well**. The determination of whether or not the contractor's interpretation prevails can be a complicated one depending upon the nature of the contract (performance or prescription specifications; negotiated versus advertised; design-bid-build versus design-build; delivery systems such as a fixed priced versus cost reimbursement arrangements. It is also a function of risk shifting clauses in the contract. See the section on Contract Interpretation and the Section on Differing Site Conditions.) And remember, if there is a dispute over scope, then certainly there will be a dispute over the potential impact on the schedule and productivity. It is essential that the contractor do its homework very well to attempt to resolve any conflicts and to document any impact that the disputed change is having on the project, perhaps even more so in the case of disputed changes than those upon which there is agreement.**

The recommendation to obtain advice from an experienced co attorney is certainly applicable to issues regarding contract interpretation. It is helpful if that attorney has some training in construction or engineering, can read plans and specifications and can understand critical path scheduling.

ANALYSIS OF SCOPE OF WORK

The scope of work may have three of more components and so it must be carefully evaluated (***because a change order can morph from just the changed work into these other impacts to productivity and schedule may have great cost consequence than the changed work itself, it is imperative that the contractor analyze each change thoroughly to understand***

its potential effect on its work and the work of subcontractors; for example, if a change delays the project but the owner denies a request for time extension, now there is the pricing of the change and for labor impact due to the acceleration) :

- The so-called **changed work.** That is, if a chandelier is added to the ball room, then just the work directly required to add the chandelier is the changed work. However, the scope of the work may be more difficult because of the condition of the project at the time the chandelier is added. For example, the following questions should be asked:
    - Have labor rates increased since the basic contract
    - Will overtime be required to perform this work
    - Will there be additional material handling or will there be constraints to material handling because of the condition of the work?
    - Will there be congestion or interference from other crews to perform this work?
    - Is rework required
    - Will additional equipment be required to perform the work
    - Will this cause a shift in the crews from one location to another
    - Is there stop and go, waiting for a decision
    - Will this cause a change in the work sequence
    - Additional clean-up
    - Additional inspections
    - Will this change impact the critical path
- But there is the **unchanged work.** For example, even though the change does not directly affect the other trades, that additional work affect the work environment in which the work is to be performed, so how they are performing their work and the conditions under which they are performing their work must be considered in scope evaluations, such as:
    - Is material handling affected
    - Will there be congestion with other crews
    - Will other crews be forced to stop and go, to move from one location to another (mobilizations and demobilizations)
    - Will their work sequence be affected
    - Will their work be accelerated
    - Will overtime or shift work be required
    - Additional clean up
    - Suspension of work
    - Delays to the critical path
- As any change has the potential to affect both the sequence of work and the contract schedule, it is imperative to **evaluate and update the construction schedule** updated to show its effect. As indicated, often a morphs into an

acceleration when either a justified request for a time extension is unreasonably denied by the owner, or when the contractor just fails to evaluate a change and the additional time or impact is not understood by the contractor and therefore no request is made to extend the schedule.

- And as each change must be evaluated for its effect on the schedule, if changes continue to pile up, then it is important to evaluate the cumulative effect of the changes **(multiplicity of change – See end of article for discussion of multiplicity of changes)**

- Evaluation should also include an analysis of the **liability for the cost** associated with it, such as no damages for delay, various limitation of costs clause as will be discussed in the Chapter on Pricing.

CARDINAL CHANGES

An owner, including the Federal Government, has the right to unilaterally direct the contractor to perform additional work **within the scope of the contract.** The contractor has a duty to comply with such a directive or be found in breach of contract. Let's say that again: even if the work is disputed and the contractor has good reason to believe that it was not included as a part of the original contract, the owner has the absolute right to direct the contractor to perform extra work and the contractor must do so. Of course, as we shall see, the contractor may protest in writing and has a process for pursuing a claim for equitable adjustment. **UNLESS,** the directed work is what is called a **CARDINAL CHANGE.** A cardinal change is one which is one which would have been outside the contemplation of the parties at the time of the execution of the contract. (See also the section on **Schedule Abandonment** at the end of this article.) Such changes may not be unilaterally directed by the owner; it takes a bilateral agreement for a cardinal change to be implemented on a project. An accepted test is "whether the directed work is so varied from the original plan, was of such importance, or so altered the essential identity of the contract that it constituted a new undertaking." Thus, a contractor could refuse to perform the work unilaterally directed by the owner if it is outside the scope of the basic contract. Changes which are *"in furtherance of design*" may be unilaterally directed. For example, relocation of booms or med gas in an Operating Room would be in "furtherance of design" of the originally designed structure. However, if the original contract is to construct a clinic, adding an operating room may well be outside of the contemplation of the parties. This is what is called in the Federal arena, "reprocurement" and could not be directed unilaterally. These are shades of grey issues and counsel should be sought It would be rare that a contractor will be advised to not comply with a directive even if it is a cardinal change. Most often, compliance while reserving one's rights is the best course of action to pursue; **however, a reprocurement in the federal circles may indeed require new authorizations and funding, so do not be cavalier about proceeding without prudent evaluation of the risks and input from**

that construction attorney. But pricing for cardinal changes opens up avenues for additional cost which must be analyzed as well. These will be discussed in the section on **Pricing.**

PROJECT MANUALS. Often a project manual, setting forth various administrative requirements for submittals, scheduling, RFIs, change order and claim processing will be set forth in the contract documents. It is a good practice but one which contractors often fail to comply with. Such failure may not be fatal to a claim, but why take the chance. Further, the intent of the Manual is to facilitate such administrative actions and have everyone on the same page, so it is counter to good project administration to fail to follow the procedures and processes set forth

AUTHORIZED REPRESENTATIVE. Only the owner and authorized representatives may order changes. Often, inspectors or resident engineers attempt to do so. In the Federal Sector, if the representative does not have actual or implied authority to commit the government to extra work, then the direction is invalid and the contractor would proceed at its own risk. There is more discretion in the private sector, but again, why take a chance. Determine at the outset the limitations of authority of the various parties, and if a person without authority attempts to direct extra work provide written notice to the Owner and ask for the Owner or an authorized representative to confirm that the work is extra and that the contractor should comply with the direction. This often occurs when an inspector wrongfully rejects work as non-compliant and requests the contractor to perform work which is actually variant from the contract documents. The contractor should follow the same procedure: write a letter to the owner taking exception, providing support for its position; and if the owner insists on the contractor complying with the inspector's directions, request that such direction be provided by an authorized representative.

CAVEATS: The following are a few bullet points of caution about which the project team should be cautious, but the first of these is to be familiar with the implications of the various types of contracts, and the rules of interpretation. (See Article entitled Contracts and Contract Interpretation.)

- **Verbal Directives. The changes clause is very specific that changes should be directed in writing. If there is a verbal directive, follow the same procedure above prior to compliance. Write the owner asking that the verbal directive be confirmed in writing. Always maintain documentation (meeting minutes, daily reports) of such directives.**
- **Written Notice. So often we see articles written by very scholarly and learned authors which describe how a contractor can beat the language in the contract**

documents which require timely written notice. Frankly, I won't go there. If it is too difficult for a contractor to read and understand the clauses requiring written notice and to actually have the literacy to write down on a piece of paper a notice of a potential change, claim or differing site condition . . .if that is too difficult, he should give real consideration to a different business.

- **Communicate. Make sure the field gets the current information; update schedules, budgets, schedule of values. If a cost reimbursement contract, request that the guaranteed maximum number be adjusted accordingly; also make sure that the cost you are billing is consistent with the allowable items of cost and not any of the cost which is to be excluded under the contract.**

- **Respond on a timely basis to RFPs. Both the contractor and the owner have obligations of timeliness. If an RFI triggers the need for a change order, the Owner should issue an RFP in a reasonable period of time and the contractor should respond on a timely basis as well with a properly documented proposal. The owner is entitled to a reasonable period of time in both issuing an RFP and evaluating and implementing the change order. The contractor is as well. However, what is "reasonable" is dependent upon the circumstances of the project at the time. If the contractor is not on top of pricing and negotiating changes, it could be held responsible for delays which flow therefrom.**

    - **A few words about the process. The contractor should thorough research the plans and specifications before writing an RFI to assure that the contract documents themselves do not contain the answer. Then clearly set forth the issues (including contract references) as well as the nature of the clarification or direction that is needed. In many instances, it is helpful for the contractor to submit potential solutions to the issue raised. The contractor should also inform the designer of the realistic need date (operative word is "realistic") for a response and the consequences of failing to have a timely answer. The designer or the owner's representative should reply with the timeliness required. Even if the contract provides a certain duration to answer, if the schedule will be impacted as a result of taking the full time allowed, effort should be made to expedite the response. The contractor should update both the RFI log and the schedule (if more than a clarification and work will be affected, it should be carried through the change order, and included in the monthly schedule update as well as the contractor's monthly narrative of progress. Of course, it is also recommended that there be desk top reviews at the beginning of the project to attempt to discover as many issues with the specifications and drawings as possible to avoid a continuation of these issues throughout the project.)**

- **The entire team should be committed to avoidance of delays to the critical path, but a more impactual issue is that of acceleration and impact to the workflow of the contractor. Managing the timeliness of the RFI and Change Process to maintain momentum, learning curve and workflow should be primary mutual responsibilities of the parties.**

- **Timeliness may not be next to godliness but the calendar is another document that both parties must manage: the owner has a reasonable period of time to perform certain administrative and decision making functions; the contract itself specifies the number of days a contractor has to perform certain administrative functions, such as NOTICE; and in some contracts, the contractor is given a specified time for responding to change directions or RFPs. We are in an age in which laxity in complying with the time limits is not acceptable to the courts and to administrative boards. So, comply. Of course, there are ways to overcome both verbal changes and failing to give written timely notice, but inevitably even if you win, you lose. You end up in some form of legal resolution which costs time and money. So, why not just do it right! Give timely written notice and if you fail to do so, don't become angry with your attorney if he loses the law suit. He can only play the hand you gave him (or her . . .there are some excellent female construction lawyers, by the way.)**

- **Pricing. This will be discussed in extensive detail in the article on Pricing. However, for now, let it be said that the project team should thoroughly review the contract documents and the Project Manual for issues that relate to pricing and pricing limitations. For example, it may be that home office overhead is excluded unless a component of the contractor's direct cost (for example a project manager who is time carded to a specific project), or delay cost may be excluded due to a No Damages for Delay Clause.**

- **Availability of funds. In the federal sector, the government is limited by the amount set forth in an appropriation. The contracting officer can spend no more than is specified in the appropriation which authorized the project. Often the same is true in state and local government projects; and too often a private owner is limited by a loan agreement. The contractor has a right to know the availability of funds prior to either commencing work on any project, or performing extra work that has been directed by the owner.**

- **Reserve those rights! If time extensions or labor impact cannot be agreed upon, reserve rights to submit a claim at a later time. If not, there is possibly an accord and satisfaction which will bar future recovery. But maybe not! But again, why take the**

chance. When in doubt, do the prudent thing and don't bet on the come that you will be able to prevail when you have not done so.

THE CHANGES CLAUSES

AIA A 201:

"7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor, and Architect, stating their agreement upon all of the following:

1. **A change in the work**
2. **The amount of the adjustment in the contract sum, if any, and**
3. **The extent of the adjustment in the contract time, if any**

NOTES BY AUTHOR

- ***a.*** **A *written i*nstrument. A verbal may not stand up in court, so either get it in writing or confirm that you are performing an oral direction which you consider a change.**
- ***b.*** **Prepared and signed by owner . . .et al. In other words, only authorized representatives can issue a change order. See previous material for concepts of implied and apparent authority, however.**
- ***c.*** **By "change in the work" is meant "furtherance of design". A unilateral direction to perform work outside the scope of the contract, called a cardinal change, is not authorized by the changes clause.**
- ***d.*** **Contractors often fail to include a request for time extension or labor impact in their pricing. Either do so or reserve rights to do so, or probably lose the opportunity to do so. Update your schedule to add activity.**
- ***e.*** **Maintain a separate cost code for changes.**
- ***f.*** **Bill for change order work promptly.**

"7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and the Architect, directing change to the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time or both. The owner may, by Construction Change Directive, without invalidating the contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

NOTES BY AUTHOR:

a. **Maintain field records.**
b. **Comply with all notification requirements**
c. **Have time sheets signed by owner's representatives**
d. **Update your schedule to reflect additional work and any impact to it.**
e. **Maintain a separate cost code for changes.**
f. **Revise schedule values.**
g. **Expedite formal change order**
h. **If formal change order not forthcoming, bill for the completed work. Owner is the bank, not the contractor.**

FEDERAL CHANGES CLAUSE

(a) The Contracting Officer may, at any time, without notice to the sureties, by written order designated or indicated to be a change order, make any changes in the work within the scope of the contract, including but not limited to changes:

(1) In the specifications, including drawings and designs;
(2) In the method or manner of performance of work
(3) In the Government-furnished facilities, equipment, materials, services, or site, or
(4) Directing acceleration in the performance of the work

(b) Any other written order or an oral order (which terms as used in this paragraph (b) shall include direction, instruction, interpretation or determination from the Contracting Officer, which causes any such change shall be treated as a Change Order under this clause, provided that the Contractor gives the Contracting Officer written notice stating the date, circumstances, and source of the order and that the Contractor regards this as a change order.

(c) Except as herein provided, no order, statement or conduct of the Contracting Officer shall be treated as a change order under this clause or entitle the Contractor to an equitable adjustment hereunder.

(d) If any change under this clause causes an increaseor decrease in the Contractor's cost of, or the time required for, the performance of any part of the work under the contract, whether or not changed by any order, an equitable adjustment shall be made and the contract modified in writing accordingly; Provided, however, that except for claims based on defective specifications, no claim for any change under (b) above shall be allowed for any costs incurred more than 20 days before the Contractor gives written notice as therein required. And provided further that in the case of defective specifications for which the Government isresponsible, theequitable adjustment shall include any increased cost reasonably incurred in attempting to comply with such defective specification.

(e) Is the Contractor intends to assert a claim for an equitable adjustment under this clause, he must, within 30 days after receipt of a written change order under (a) above or the furnishing of a written notice under (b) above, submit to the Contracting Officer a written statement setting forth the general nature and monetary extent of such claim, unless this period is extended by the Government. The statement of claim hereunder may be included in the notice under (b) above.

(f) No claim by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this contract.

NOTES BY AUTHOR:

a. **Remember, this is the Federal Government and play by its rules. Comply with timeliness of notification requirements.**
b. **"Written" means "written". You may be able one day to collect on a verbal but don't count on it.**
c. **"Contracting Officer" means a person designated with the authority both as to making a change and the amount he can authorize. Get a copy of the Contracting Officer's warrant at the outset of the project.**
d. **Again, by "scope of the contract" is meant "furtherance of design", and not a change beyond the contemplation of the parties.**
e. **Update the schedule and maintain a separate cost code for formal or constructive changes.**
f. **Reserve rights for schedule and productivity impact if not possible at the time of the execution of the change order. Daily records should reflect the change order work.**
g. **Get your billings in. Government is the bank, not you.**

MULTIPLICITY OF CHANGES

The discussion of "multiplicity of changes" is reserved for last as it is not a concept often used (frankly, not used often enough) and many experts in the industry seem to either be unfamiliar with the concept or even timorous to use it. Yet the concept, when backed by the facts, is as "real as tomorrow's rent" and can be devastating to a contractor.

A single change to a construction contract may affect the critical path or the work flow of the project. However, in many instances, multiple changes may be issued on a project, perhaps none of which in a vacuum would affect the completion date or labor productivity. However, when taken together, the cumulative effect of all the changes may have a profound effect on either labor productivity or schedule or both. I call it the "tyranny of numbers". When there

are so many Requests for Information and Changes that they inundate planning and the ability to maintain the flow of work, then all of those changes together have changed the way, or the time, the project was intended to be constructed. When this occurs, it is called "multiplicity of changes" or the "cumulative effect of changes" and within itself constitutes a change to the contract.

Your construction attorney will tell you that the academic definition of multiplicity is "the synergistic effect of an undifferentiated group of changes". What the heck does that mean? Obviously, the determination of whether or not a group of . . .or a bunch of . . .changes can give rise to a claim by the contractor is very fact and schedule driven. Just because there are a lot of changes does not mean the contractor is entitled to a claim based on multiplicity of changes. As always, the contractor has the burden of demonstrating through field documentation, labor cost reports, earned value, schedule and work flow tracking a causal relationship between all those changes and the effect on cost and time. The daily report showing what is happening is crucial. The schedule updating is a vital tool which may show effect on work flow (movement of crews, stacking and other effects which materially change the method by which the contractor reasonably had intended to perform the work). The Time Impact Analysis (TIA) is a great tool for this purpose.

Earned value is another important cause and effect tool . . .the cause being the multiplicity of changes affecting a given cost activity, earned value showing the impact on that activity supplemented by corroborating daily reports.

Multiplicity is akin to the cardinal change rule (the cardinal change being one which basically changes the character of the work to be performed). And the problem is that it can be subtle, slowly creeping up on you without the visibility or drama of that one big change which turns the project upside down. Again, the reason for those daily records, monitoring work flow and earned value to catch in real time what the effects of all those RFIs and Changes are on the project.

SCHEDULE ABANDONMENT

Another special issue to be discussed is "schedule abandonment". Just because a project is extended by a few months or even more is not necessarily a case of schedule abandonment. In this industry, it is foreseeable that most project schedules are extended, often due to changes and other variances the responsibility of others. Of course, if a one year schedule is extended by another year, that would probably be beyond any contemplation of the parties and would be considered an abandonment of the schedule. Schedule abandonment is a breach of contract, and thus the contractor's measure of damages would be based on a breach concept entitling it to consequential damages, instead of the limitations which may be specified in the contract.

One of my pet litmus tests of schedule abandonment is by general contractors who "schedule by finger pointing"; that is, holding meetings with craft contractors and pointing to different places to work that day. "You can go there, or here, or over there. There's always someplace you can work!" and thereby abandoning the use of the logic diagram and its updates required by the contract documents. The work flow and thereby planned labor productivity is destroyed. And generals often try to slip by the noose claiming that the "as directed" clauses in the subcontract agreements give them this right. Our view is that those clauses are limited only to reasonable changes in the schedule or work flow, but not to the extent that the originally planned sequence of the project is tossed out of the window. Talk to your lawyer as these claims are not well received by the general contractors who use the "schedule by finger pointing" method of trying to run a job.