# IMPROVING THE CHANGE ORDER PROCESS

*A white paper by the American Subcontractors Association of Metro Washington*

## INTRODUCTION – *Ron Churchey, Shapiro & Duncan, Inc.*

The American Subcontractors Association of Metro Washington (ASAMW) established a Task Force to offer recommendations to improve the overall change order process. The TF was composed of volunteer Subcontractors and General Contractors who are members of ASAMW.

Why was this Task Force formed? At the Subcontractor level, uncertainty has enveloped the act of getting paid for change order work. At the General Contractor level, the proposals that Subcontractors deliver don't always conform to contract requirements. Proposal requests log jam at every level. There is finger pointing between General Contractors and Subcontractors, between General Contractors and Owners, and between Owners and lenders! We are all to blame. The process is often out of control. While some individuals do an exemplary job, it takes the whole team doing the job right for the process to be successful. Success is being measured as getting paid timely for extra work performed.

There are many stakeholders in the construction process with nearly all of them involved in the change order process. While not all stakeholders are represented in the TF, if improvements to the process as recommended in the report are implemented, then the TF feels there will be significant advancement of the change order process. Those advances will have a positive impact on all stakeholders.

The TF hopes you find this document has value to your business and that you will share it with your project teams and your peers to improve our industry's change order process.

Our recommendations have been separated into the following headings. Each heading was championed by one or two members of the Task Force, then reviewed and finalized by the entire Task Force.

- Reducing the number of changes by doing better design and coordination
- Setting expectations early
- Defining what is a change
- Open ended flow down
- Preparing "approvable" change order proposals
- Timing
- Training

## REDUCING THE NUMBER OF CHANGES BY DOING BETTER DESIGN & COORDINATION –

*Neil Stablow, Donohoe Construction Company, Inc.*

Change orders generally fall into three categories; Owner initiated, Government review and inspection, and Coordination. By far the most difficult for Owners is the coordination changes. Unfortunately, at the same time, more and more coordination is being forced onto the Contractors and Subcontractors. The typical AIA type contract between an Owner and Contractor includes language that states that the Contractor (and Subcontractors) include in their scopes "what an experienced Contractor having done similar projects should have known during the bid and negotiation process".

Therefore, we as Contractors typically have a contractual obligation to make a diligent effort to coordinate. Documents are often being bid well before their completion to facilitate financing and contract negotiations, leaving an even greater extent of coordination to the Contractors.

To meet our contractual requirements and mitigate change orders due to coordination, Contractors must approach projects more proactively than ever before. It starts with preconstruction. As Contractors and Subcontractors, we can provide a valuable service to our clients by conducting detailed reviews of plans and specifications during the design process. By utilizing our collective experience to identify potential issues during the design process, we can focus the design team's attention on these issues prior to the release for bid. Simply estimating projects with a square foot or unit count basis from historical data provides no valuable information to the design team, yet there is an implied expectation for Owners that the design is progressing satisfactorily.

When documents are being bid for final contract purposes, we cannot simply bid "what is on the documents". There is always a fear that including items not shown will render the bid non-competitive. However, if those items are clearly and properly qualified, most General Contractors and Owners will take note and reward, rather than penalize the Subcontractor. Additionally, bid RFI's are a very effective tool to identify issues and even the playing field for all bidders. To minimize change orders, it is essential that the bid process include an analysis of the design to identify conflicts and missing information.

Once a project is bid and awarded, the coordination process must begin in earnest. Too often, Subcontractor staff are not assigned immediately to projects because the on-site work does not begin until sometime in the future. We have found that if proper coordination is done prior to construction, Owners are quite willing to pay for any additional work that is required to resolve conflicts that are identified. Conversely, when conflicts occur during construction and the resulting additional work could have been mitigated through diligent coordination, Owners resist paying (or paying full price) for the additional work. Building Information Modeling (BIM) technology that is available today greatly improves the efficiency of the coordination process and the coordination documents that are produced. Identifying issues such as conflicts and clashes however is only the beginning. Many issues are difficult to resolve and may require substantial analysis and redesign, all of which takes considerable time. Therefore, it's critical that the process begin as early as possible and that adequate resources are committed for the entire process.

Change orders are an inherent element of the construction process and will never be eliminated entirely. However, systematic, timely, and diligent efforts during preconstruction, the bid process, and the submittal process can greatly reduce the quantity and magnitude of coordination related change orders, resulting in more efficient construction and better financial outcomes for all stakeholders involved in the project.

## **SETTING EXPECTATIONS EARLY** – *Bill Whiting, Whiting Turner Contracting Co., & Ron Churchey, Shapiro & Duncan Inc.*

Outlined below are expectations that require discussion and resolution before the first change order proposal is prepared. Agreement on such items will lead to credibility for all the stakeholders. All Subcontractor pricing proposals need to be an accurate assessment of the extra work involved in the change proposal and include a complete breakdown of labor and material and agreed-to markups. The General Contractor needs to present the proposal to the Owner; therefore it is critically important that the information be complete, accurate and defendable. If this is done well with the first Change Order proposal, the Owner will have the confidence that the change order process is fair and will likely approve Change Orders in a more-timely manner for the rest of the job. The General Contractor should be both the Subcontractors' and the Owner's advocate; so help them by providing accurate Change Order information. Then it is very likely everyone will be able to bill and receive payment more quickly.

*During Pre-Construction phase or at pre-award meeting discuss and establish project requirements:*

1. Change order markups allowed for the project – 1st, 2nd, 3rd tier Subcontractors.
2. Determine what is included as the "Cost of the Work" per the Prime Contract; i.e. Forman's time, etc.
    a. Make sure cost of work is defined and understood. It can be confusing as it relates to what is deemed the cost of work and/or part of the Overhead. Examples: supervision, small tools, warranty, bond.
3. Determine what is included in the "Overhead."
    a. Make sure that the items noted to be part of your Overhead is defined and understood. Example: Some contracts consider items such as Project Management, Supervision, Warranty etc. to be part of your Overhead.
4. Agree on labor rates with burden and make them an attachment to the Subcontract.
    a. Breakout Base and Overtime Rates, and burden.
    b. Examples of Labor Burden Items *(Note: this is not a complete list):*
        i. Federal Unemployment Tax
        ii. State Unemployment Tax
        iii. FICA
        iv. 401K Match
        v. Workers Compensation
        vi. Health Insurance
5. Discuss and agree on level of detail required in a Change Order Proposal including second and third tier Subcontractors that can consist of:
    a. Including labor and material breakdown per item. Establish the labor and material database or estimating manuals that are to be used such as RS Means, MCAA, NECA, PHCC etc.
    b. Including Drawings highlighted to show changes
    c. Pictures – If applicable
    d. Subcontractor and Supplier proposals
    e. Credits for deleted work
6. Discuss and agree on turnaround time for pricing proposals
7. Discuss and understand what proper notification (flow down) entails when there is a potential change.

a. Review notice requirements. Refer to the Prime Contract, your Subcontract, and Specifications to find these requirements.

## **DEFINING WHAT IS A CHANGE** – *Steve Wood, Grunley Construction Co., Inc.*

At its most basic level, a change in construction is any alteration to the performance of that which was prescribed in the initial contract or preceding settled/changes. This change can come in many forms. To facilitate the timely and accurate identification of a change it is absolutely essential that the initial contract between the parties be detailed as to the scope of work to be performed and the performance terms. The more detailed the initial contract the easier it will be to identify entitlement, and the less likely it will be that the change will result in a dispute with the prime Contractor.

Likely, the easier to identify changes are those changes to the scope of work to be performed. These include changes to:

- The quantity of the work to be performed, either more or less
- The layout of the work to be performed
- The type of material to be used
- The manner in which the material will be placed or installed
- The timing or sequence of the installation or work
- The anticipated production rates to be achieved during the performance of the work

These changes come about by many different means. Some examples are:

- A Change Directive or Request for Proposal issued by the Owner, Architect or Engineer
- Design development in the course of a design-build project
- The unforeseen condition discovered in the performance of the work
- Errors or omissions in the contract documents
- An RFI in which the response or direction therein effects the performance of your work
- A Submittal Response which requires means or methods differing from those contracted
- Impacts from other Subcontractors and their performance on the project
- A work stoppage, which could occur because of action by Owners, the General Contractor, Building Officials or Governments

Perhaps more difficult to identify and substantiate are those changes to terms or expectations of the contract performance. These may include:

- A change to the terms of payment or compensation
- Access to the project site to include delays, denials or restrictions
- Loss of productivity in the performance
- Cumulative or collateral impacts from other changes to the project
- Weather impacts resulting from schedule deviations

These impacts may only become evident over the course of time and may require the Subcontractor to make notice discovery. Some of those listed may be precluded by the initial contract hence the need to have well defined contract terms and to be well aware of what's allowed by the contract.

Not all changes will have a cost impact and for some the cost may be insignificant to the extent that it does not serve to pursue that change with the General Contractor. Conversely, change may have no cost while still impacting your work to the extent that it should still be memorialized via a Zero Cost Change Order to the contract.

## **OPEN ENDED FLOW DOWN** – *Jitu Patel, Siemens Industry, Inc.*

One of the most overlooked contract provisions in a subcontract is the so-called flow-down clause. The purpose of the flow-down clause is to bind the Subcontractor to the terms and conditions of the prime contract – the contract between the General Contractor and the Owner. The prime Contractor wants the terms and conditions of the prime contract referenced and incorporated in its written subcontracts to ensure that its Subcontractors are obligated to provide everything that the prime is required to provide to the Owner. Thus, if the prime contract permits the Owner to audit the Contractor's books and records to verify costs, the flow-down clause ensures that the Contractor is also permitted to audit the Subcontractor's records.

A flow-down clause does not just incorporate the prime contract. It provides that the individual terms and conditions in the documents, which are referenced in the prime contract, apply between the Contractor and the Subcontractor to the same extent as they apply between the Owner and the Contractor. These clauses can impose substantial legal obligations upon a Subcontractor because they can bind the Subcontractor to duties and obligations that are not spelled out in the subcontract, and are instead buried in other contract documents that the Subcontractor might not have seen. It is therefore critical for Subcontractors to obtain a complete copy of the prime contract, including the main agreement and the General, supplementary, and any special conditions before the project is bid. From the General Contractor's perspective, the flow-down clause is an effective way to implement the objectives of the Owner and make sure the Subcontractor is bound to the same extent that the General Contractor is bound to the Owner. However, General Contractors that afford a Subcontractor greater rights than they have under the prime contract are taking on risk. Failing to read and understand the prime contract when there is a flow-down clause can come back to haunt Subcontractors. A flow-down clause binds the Subcontractor to the prime contract requirements involving almost everything including change orders, timing of notices, payment requirements, indemnification, dispute resolution, damages for delay, requirements to provide release/waiver forms, warranty obligations and insurance requirements, just to name a few.

The effect of a flow-down clause is demonstrated by the following example: A Subcontractor had a claim for additional costs on a project. The subcontract did not contain a time limit by which written notice of the claim had to be provided to the General Contractor. Although there had been verbal discussions about the claim, the Subcontractor did not submit the claim in writing to the General Contractor until near the end of the project. The General Contractor cited the prime contract, which required written notice of claims to be provided within 21 days of the date that the claim arose. The General Contractor contended that the Subcontractor's claim was waived because it was not submitted in writing within 21 days. The General Contractor pointed to the flow-down clause and argued that the 21-day notice of claims requirement was binding on the Subcontractor. The court agreed and dismissed the Subcontractor's claim as untimely and waived. In another case, a Subcontractor filed suit against the General Contractor seeking progress payments and payment for additional work. The subcontract did not specify any particular method of dispute resolution, so the Subcontractor filed suit in court in the county where its office was located. Under the General Contractor's contract with the Owner, however,

all disputes had to be arbitrated by a panel of three arbitrators in a county on the other side of the state. The General Contractor sought dismissal of the lawsuit on the basis of the arbitration clause in the prime contract, arguing that the Subcontractor's claim had to be arbitrated. The court agreed and dismissed the lawsuit. This required the Subcontractor to pursue its claim through arbitration with three expensive arbitrators in a city 300 miles away from its office. The Subcontractor eventually settled the case for a low amount because the cost to pursue the claim was so high. In another case, a court ruled that a no-damages-for-delay clause in the contract between the Owner and the Contractor was binding upon a Subcontractor by virtue of the flow-down clause. As a result, the Subcontractor could not recover from the General Contractor, which had caused a two-year project delay and enormous additional costs to the Subcontractor.

A Subcontractor must protect itself from these risks by obtaining a copy of the prime contract and reviewing it carefully. If there are provisions in the prime contract that a Subcontractor does not want to be bound by, the subcontract must qualify its bid to identify clauses in the prime contract that do not flow-down. Some subcontracts that bind the Subcontractor to the obligations that the General Contractor assumes toward the Owner do not give the Subcontractor the benefit of any rights and remedies that the General Contractor has under the prime contract. Subcontractors should request the following language be included in the flow-down or flow-through clause: "Subcontractor shall have the benefit with respect to its customer of all the same rights, remedies and redress that the customer has pursuant to its contract with its own customer."

This sentence gives the Subcontractor all the benefits that the General Contractor has under the prime contract. For example, the prime contract might specify that retainage is to be reduced to five percent when the project is fifty percent complete. With the above language giving the Subcontractor the benefit of all rights, remedies and redress that the General Contractor has against the Owner, the Subcontractor can demand reduction of its retainage at fifty percent completion as well. One way a Subcontractor can attempt to protect itself is by including a precedence provision in the subcontract. A precedence clause provides for one contract document to control over another in the event of conflicts or inconsistencies between them. A precedence clause might provide that the subcontract governs over any other inconsistent or conflicting terms in any other contract document. A General Contractor would likely prefer a precedence clause that states that in the event of a conflict or inconsistency, the provision imposing the greatest burden or risk on the Subcontractor shall control. If the parties have specifically negotiated certain provisions, the agreement should state that the specifically negotiated portions control. In summary, when your customer proposes to use a contract or purchase order that references or incorporates other documents, obtaining and reviewing the incorporated documents in advance of submitting the price is a must. Failing to read and understand a document incorporated by reference will not be a defense to enforcement of the provision.

The problem Sub-Subcontractors are facing is that most often they don't request, nor do Subcontractors provide their Sub-Subcontractor a copy of the prime contracts. In most cases, Sub-Subcontractors don't even get a copy of the contract between the GC and the Subcontractor. Assuming that Sub-Subcontractor has obtained a copy much later during the project; it is usually too late for him to ask the right questions or to request to modify some of the clauses. Moreover, the Sub-Subcontractors contract could be an extremely small percentage of total project value and this Subcontractor or Sub-Subcontractor can't afford to spend any money to have an outside professional review the prime contract.

What do you do if you have requested the prime contract, but it is not provided to you before you bid the project? You must be certain to condition your bid (terms, scope and price) on the review of the prime contract. That review has to take place before you sign the subcontract agreement.

The flow down clauses for change order work is even more dangerous if not managed right from the beginning. More often the lower tier Subcontractors get the pricing request after the deadline has passed, or are allowed no more than one week to price the change order. But obtaining a formal change order from the upper tier Contractors can take months. This means the Subcontractor has spent all the money to perform the work without any formal amendment to their contract. Too often when the time for formal agreement comes, PMs from GC and first tier Contractor have changed and have little or no knowledge about the change orders. In the end after many months or even years, they make global settlement and Sub-Subcontractors are forced to accept them.

## PREPARING "APPROVABLE" CHANGE ORDER PROPOSALS – *Ken Collins, LF Jennings, Inc. and Ron Churchey, Shapiro & Duncan, Inc.*

The purpose of this section is to explain the processes that are required in order to write an Approvable Change Order Proposal that will establish trust with the GC, Design Team, and Owner to allow for an expedited review and approval of your change proposal.

Unfortunately, it is common practice for Subcontractor's to submit proposals that won't be approved due to the following:

- Including labor rates that can't be substantiated.
- Using the incorrect markup rates for overhead and profit.
- Including overhead items in the cost of work portion of the proposal.
- Not including a credit for labor and material cost of work that is not being completed.
- Listing labor and material cost as lump sum instead of breaking it out per foot of pipe, per fitting as an example.

By doing so, you are prolonging the approval of your proposal and will lose the trust of your customer to the point that they may push your proposal to the side and review a Subcontractor's proposal that includes the level of detail required to explain the changes and that complies with the contract terms and conditions for changes.

By following the steps below you will be able to clearly communicate the changes on your jobs and to be paid fairly for those changes.

### Step 1. Read the Directions – Know your contract

**a.** It very important that you take time to review the Prime Contract *"BLDG Owner/GC Contract",* your contract with the GC, and the Specification Section that addresses Changes in Work to identify and document the items listed as cost of work, part of your Overhead cost, notice requirements, markup for OH & Profit before you submit your first change proposal. It is recommend that you file these requirements in your Change Order Folder so that they are readily available and that you modify your change proposal template to reflect these requirements. You may discover variances in the terms and conditions between the documents. It's recommended to point them out to your customer and that you create your change order template to include the terms that are favorable to you.

**b.** What does the GC's contract with the Owner Say?

**i.** Refer to Article 13.2 example shown below. Pay attention to the highlighted portion of the paragraph that explains the adjustments in the contract sum and time. It references change directives, the Contractor's cost of labor, material, equipment, and overhead and profit. It addresses payment for the work pending final determination of the total cost of the change before the Contract Change Order is issued.

**§ 13.2** Adjustments in the Contract Sum and Contract Time resulting from a change in the Work shall be determined by mutual agreement of the parties or, in the case of a Construction Change Directive signed only by the Owner and Architect, by the Contractor's cost of labor, material, equipment, and reasonable overhead and profit, unless the parties agree on another method for determining the cost or credit. Pending final determination of the total cost of a Construction Change Directive, the Contractor may request payment for Work completed pursuant to the Construction Change Directive. The Architect will make an interim determination of the amount of payment due for purposes of certifying the Contractor's monthly Application for Payment. When the Owner and Contractor agree on adjustments to the Contract Sum and Contract Time arising from a Construction Change Directive, the Architect will prepare a Change Order.

**ii.** Refer to Article 13.4 example shown below. This article addresses concealed or unknown conditions that are encountered. It allows for an adjustment in the contract sum and time if mutually agreed upon. It also requires that the Owner and Architect be notified before conditions are disturbed.

**§ 13.4** If concealed or unknown physical conditions are encountered at the site that differ materially from those indicated in the Contract Documents or from those conditions ordinarily found to exist, the Contract Sum and Contract Time shall be equitably adjusted as mutually agreed between the Owner and Contractor; provided that the Contractor provides notice to the Owner and Architect promptly and before conditions are disturbed.

**iii.** Refer to Article 14.5 example shown below. This article covers the Contractor being delayed due to changes in the work and multiple other scenario's and offers relief by extending the Contract Time.

**§ 14.5** If the Contractor is delayed at any time in the commencement or progress of the Work by changes ordered in the Work, by labor disputes, fire, unusual delay in deliveries, abnormal adverse weather conditions not reasonably anticipatable, unavoidable casualties or any causes beyond the Contractor's control, or by other causes which the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine, subject to the provisions of Article 21.

**c.** What does the subcontract with the GC require?

**i.** Identify notice requirement and deadline for proposal submission: Refer to screen shot below for example.

Contractor may, at any time, unilaterally or by agreement with Subcontractor, make changes in the Work covered by this Subcontract. Any unilateral order or agreement under this article shall be in writing, and the Subcontractor shall proceed without delay when directed to do so in writing by Contractor. Subcontractor shall submit an itemized written proposal as indicated below within the time frame outlined within the Contract Documents but not later than five (5) days after receipt of Contractor's change request. If the Subcontractor does not respond within five (5) days, Contractor shall provide an estimated cost for the change, and the Subcontractor shall accept that amount, or the amount approved by the Owner. If a time extension is required for the change, then the Subcontractor must submit the request for time extension with the estimated cost proposal or no time extension shall be considered. A proposed change request in no way invalidates this Subcontract. The following items shall be included within the estimated cost proposal:

**ii.** Identify the requirements that pertain to the items that need to be referenced on your proposal and the requirement for labor and material breakout. Refer to screen shot below for an example.

1. Reference to Project name.
2. Reference specific change request or RFP issued by the Contractor.
3. Itemized description of each change.
4. Itemized quantity for each itemized description
5. Itemized unit cost for each itemized description
6. Maximum mark-up inclusive of overhead and profit in accordance with Exhibit "A".
7. Total proposal cost.
8. Time extension request.
9. All Subcontractor's proposed changes which must be submitted on Contractor's "Subcontract Proposal Change Summary Form" included in Exhibit "A".

**iii.** Field Work Order – "Time and Material": Refer to highlighted example below. Note that Field Work Orders must be signed by the Contractor's Superintendent or Project Manager on the day the work is performed. The proposal must be submitted within 5 days of the date of the work. You need to make

sure that your Field Foreman understands this requirement and that you have a reminder in place to ensure that you comply with this requirement.

Field Work Orders must be signed by the Contractor's superintendent or project manager on the day the work is performed. A cost proposal for the Field Work Orders must be submitted to Contractor within five (5) days of the date the work is performed. The proposal shall be itemized with quantities, unit costs and a clear description of the work performed, as indicated above. Unit costs must be in accordance with the Subcontract unit cost amounts when applicable. If no unit costs are outlined within the Subcontract, then the unit cost must be acceptable to the Contractor and Owner. In addition to the other conditions of payments set forth in this Agreement, payment of Field Work Orders shall be subject to approval by Contractor's Project Manager.

**iv.** Allowable Markup for Overhead & Profit for Changes in the Work: Refer to example below. This portion of the contract spells out the markup for overhead and profit for direct work as 10%. Your markup for work completed by your Subcontractor is 5%. It also states that the labor burden can't exceed 40%. Make sure your change order proposal includes the markups allowed per your contract. Note that percentages may vary from contract to contract and from job to job.

**G. ALLOWABLE MARK-UP FOR OVERHEAD & PROFIT FOR CHANGES IN WORK:**

1. For Work Performed by Subcontractor, the cost of the changes shall be sum of the following: Materials, supplies, equipment or rental costs, incorporated or consumed into the changed work at Subcontractor's actual cost including applicable taxes, sustained by verifiable invoices or data.

2. Labor at Subcontractor's "out-of-pocket" cost sustained by employee-hour computations at the wage scale paid the worker actually performing the labor plus a percentage to cover labor overhead (social security, Federal and State taxes, insurance and health benefits) not to exceed (40%) Forty percent.

3. Subcontractor's overhead, supervision and profit charges, not to exceed Ten percent (10%) of the above items 1 and 2.

4. For each Subcontractor, for changed Work performed by its Sub-subcontractors, Five percent (5%) of the amount due the Sub-subcontractor (no additional general conditions expenses allowed as a separate item for such Subcontractor or Sub-subcontractor).

### Step 2: Evaluate the change and perform your takeoff

a. It is recommended that you complete your takeoff on a separate set of drawings so that copies can be made and submitted with your proposal. Doing this will help the reviewer understand the changes. Remember that the GC needs to be able to clearly communcate the changes and cost/time impacts to the Owner. In lieu of printing copies of the drawings for take off, Bluebeam software is a great PDF viewer and markup tool that can be used to highlight the changes and share them electronically.

### Step 3: Spell out the change

a. Provide take off that includes break out of labor hours and material cost per item for added and deleted items.
b. As stated above, provide highlighted drawings that identifies items taken off for add and deducts.
c. Provide copies of supplier's quotes and Subcontractor proposals.

### Step 4: Apply the correct markups

a. Remember to make sure that you have updated you Change Order Proposal with the correct markups.
   - Don't forget to capture items on your template that may not be noted in the change order terms and conditions that consist of your bond cost etc.

b. Make sure that your Subcontractors proposals have the correct markup and that they didn't include items listed as cost of work that is considered overhead cost in the contract.

### Step 5: Indicate whether a time extension is required

a. If a time extension is required, you need to document the specific issue that caused the delay. Examples: Replacing work that was already installed. It could also be due to the lead-time of material or equipment that was changed, etc.
b. Provide a schedule that helps explain the delay.
c. Provide pictures if applicable.
d. Make sure extension lists workdays or calendar days.
e. Indicate whether working overtime or two shifts can be used as an option instead of adding time. Make sure that you include the cost of adding another foreman to manage the crew while working OT or adding another shift.
f. Identify specific activities in the baseline schedule and describe how they are impacted.
g. Detail new activities that are a result of the change.

### Step 6: Submit the change in a timeley fashion

a. Make sure that you submit your change proposal in the period noted in the contract documents. Notify the GC immediately if you are unable to meet the deadline due to the size of the change and the additional time required to properly price the change.

In closing, remember that the Owner and GC have a lot of Subcontractors and changes on a given job. In order for them to manage this process effectively, Subcontractors need to follow the procedures listed above to ensure that they can get paid in a timely fashion and they can focus on building the project instead of quality controlling our proposals when they haven't complied with the change process terms and conditions.

## **TIMING** – *Jonathan Mitz, Ennis Electric Company, Inc.*

When it comes to change orders, cash flow is usually the most important concern of Subcontractors, "time is money". Timing means different things to the various stakeholders and can vary for an individual stakeholder depending on the stage of the project. For Owners, a project's slow change order process presents financial unknowns, and those unknowns can lead to bad decisions. Projects have better outcomes when changes are identified and resolved swiftly. For the timing of the change order process to operate at its best, all stakeholders need to be motivated by a sense of urgency.

How does a project develop and maintain a sense of urgency? Like safety, urgency is a core value that is driven from the top of the organizational chart. The leadership of the project's Owner has to demand a fast moving change order process and provide the internal and external resources that support that expectation. Through contract language, executive oversight, and accountability, all stakeholders buy into the sense of urgency. Change order sense of urgency must be institutionalized at the earliest stages of the project, long before the first cost proposal is submitted.

Once a culture of change order urgency is in place it will spread to other entities in the project as they join the team. Engaged executives will use all the management tools at their disposal to maintain the sense of urgency. Those executives will take the necessary and timely actions to resolve any weakness in their project team, their

corporate process, and their Subcontractors/consultants. This level of accountability replaces excuses with positive outcomes.

Sometimes it takes doing someone else's job to move the process along. As a long time veteran of General Contractor community, and currently an executive at a Subcontractor I understand and appreciate the General Contractor who sets and maintains heightened change order process expectations. While a GC should not have to do a sub's job, it happens and the GC has to be prepared to do so. A GC must use its resources to maintain the sense of urgency and move the change order process along. That will mean the GC will have to price some Subcontractor changes on the sub's behalf in addition to having an adequate staff to timely price the GC's own work, timely validate Subcontractors' proposals and timely assemble the change order proposal package.

The honeymoon phase of a project is that period of time between the award of the contract to the GC and the start of construction on site. Typically, at this point the Owner is happy because they think they have the maximum cost of the project locked down, the designer is happy because the plans and specifications are a perfect and award winning, and the GC is happy because they have a profitable job with no scope gaps. Then what happens? RFI's and change orders! The people who actually have to build the details of job, not the estimators who merely had to count and price, start looking at the documents and working on the job. Honeymoon over! If the proper staff are not already in place, then the project starts to lose control, and often stays out of control causing many change order proposals to be resolved and paid long after the work is performed.

As a construction community, let's recognize that we have to better manage the change order process so that the Subcontractors can be paid timely. That management starts at the top with the setting of expectations and instilling a sense of urgency. Top management must monitor and support its internal processes and be proactive in demanding that the other stakeholders do their job timely too.

## **TRAINING** – *Jonathan Mitz, Ennis Electric Company, Inc.*

The many steps in the change order process tend to be routine. As such, the process is often delegated to smart young people and career clerical workers. These people have been shown where to enter data and where and when to send e-mails, particularly those well intentioned e-mail reminders to encourage the submission of proposals. What is lacking at all levels is training on how the whole process works and the importance of each step. Training also involves proper supervision to assure the process is being performed correctly. Many stakeholders have a change order process instruction manual but don't perform formal training; they hope that on-the-job training is sufficient. Hope does not build good habits or send the right message to those doing the process. Training is not a one and done instruction on the process. Training must take place at the beginning of each project so as to capture its distinctive requirements.

Subcontractors whose staff members each manage multiple projects concurrently are particularly challenged to properly scope and price changes in a project specific manner. These people often revert to generic verbiage and customary terms instead of the project's unique General conditions, and the contract's negotiated inclusions and exclusions. The use of incorrect generic or customary terms is not the result of being overwhelmed by too many changes, but the lack of training and supervision. Subcontractors are not alone in these bad habits as the tendency to do what you are used to do instead of what is specifically required can exist within any of the stakeholder's organizations.

It is estimated that 25% of the requests for information generated by Subcontractors already have an answer that is easily found in the specific scope of the subcontract agreement or within the contract plans and specifications. While these RFI's should never have been written, how many of them are forwarded by the General Contractor to the design team? General Contractors must train its project management staff to filter and validate every RFI it receives, this being a first step of the change order process.

That training needs to include ways to clarify and enhance the description of the needed information so the entity who has to answer the request truly understands what is being asked. Herein lies another fundamental problem with the process. Project management software, assumptions made in vacuums and electronic messages have pushed aside person-to-person communication. The written word of an RFI many times, even with the best intentions, fails to adequately explain the issue. How many times do we receive an answer to a request for information that doesn't adequately answer the question? Whose fault is it? It is everyone's fault. If we as an industry don't re-discover the telephone, then we are doomed to waste time and energy.

Stakeholder leaders must train their participants as a project starts. These leaders are responsible to routinely follow up to see that the training was effective and to make corrections as necessary to right any deficiencies.

## **CONCLUSION** – *Ron Churchey, Shapiro & Duncan, Inc.*

A Subcontractor must review and understand the change order terms during the preconstruction phase of the project. That review may lead a Subcontractor to determine that it is not in their best interest to bid the project. All Subcontractors must establish a change order process that documents how you estimate, cost account, vet/review lower tier sub proposals, substantiate labor rates, track/log proposals and use the process to train employees. It is our hope that this paper helps the partners involved "Owners, GC's, and Subcontractors" overcome the challenges involved and make the change order process win/win for everyone. Please share this white paper widely.

## BIOGRAPHIES

***Ron Churchey is Vice President of Construction for Shapiro & Duncan, Inc.***, a Mechanical Contractor headquartered in Rockville, MD. He brings more than 30 years of experience in the Mechanical and Plumbing trades. His focus is on guiding project management teams, planning and field operations to successful completion of high-rise residential, office, government/military, school, hospital, and hotel construction projects. He is the 2018/19 President of ASA of Metro Washington.

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***Jonathan Mitz is an executive at Ennis Electric Company, Inc.,*** an employee owned commercial electrical Subcontractor. Jonathan endeavors to reduce risk while increasing value for the company's employee owners and for fellow Subcontractors. Jonathan is a frequent presenter at ASA of Metro Washington chapter educational programs covering such topics such as project management best practices, contracts, scheduling, communications, and leadership. Jonathan is also on the executive board of the National Subcontractors Alliance, which provides a forum for the exchange of information and to influence the national debate on construction issues. He was 2016/17 President of ASA of Metro Washington.

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***Bill Whiting is Vice President at Whiting-Turner, Inc.*** and for 38 years and has spent most of his career working at colleges and universities, K-12 schools, institutional projects, foreign embassies, museums and historic restoration and preservation. Bill is a strong supporter of ASA of Metro Washington.

***Stephen Wood is a Senior Project Manager with Grunley Construction Company, Inc.,*** having joined the company in 2014. With over 30 years of experience in construction and project management in the Washington metropolitan area, Steve brings a rich and diverse background to the Grunley Team. Highly skilled in the orchestration and management of large, complex and historical projects, Steve maintains responsibility for

overall execution of large projects in the government, military, mission critical, and multi-family residential sectors. He provides leadership and support to ensure compliance with the project's scope and contract requirements, including conformance to safety, quality, schedule, and cost requirements.