

# Managing Construction Change Orders | Construct-Ed

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## **A look at 4 types of construction change orders, and how to manage them.**

When it comes to managing construction change orders, we're going to start by looking at 4 types of them.

Ben Franklin is quoted as saying that the only two things that are certain in life are death and taxes. Construction and home improvement contractors can add change orders to Dr. Franklin's list. Change orders are a tool that successful contractors use to manage and build their businesses. Contractors use tools and equipment in every project they complete. Learning how to use change orders is like learning how to use a tool properly.

Mechanical Engineering states that there are [23 different types of hammers](#). Each hammer has a unique use and purpose. Use the wrong hammer for the job, and the project won't turn out as expected.

Just as there are 23 different types of hammers, there are four types of change orders. Learning how to use those various kinds of change orders correctly will help contractors collaborate with project owners to deliver their projects. Using the wrong change order or failing to use change orders all together can cause a project to go bad.

It is important to understand the different types of change orders and when and how to use them.

## **The importance of education.**

Before we jump into the 4 types of construction change orders, we just wanted to let you know that here at [Construct-Ed](#), we're online learning for Pros, by Pros.

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## **Let's first look at the four types of construction change orders.**

### **1. *Lump Sum Change Order***

A contractor uses a lump sum change order when a defined change in the scope can be quantified, and a firm price developed. The project owner can request the change in the scope of work. It can also occur as a result of the contractor finding conditions that mandate a change in project scope.

In either situation, the lump sum change order has two primary components. The change order defines the change in the scope of work as well as the cost of the change. Changes in scopes of work can create an increase in contract cost or credit to the contract value.

There are two primary types of lump sum change orders. They are cost plus and credit change orders. A cost plus change order results in an increase in the expense of the project. Contractors include the direct costs of the change order. These direct costs may include labor, materials, and equipment rental. After determining the direct costs, the contractor adds a markup and profit to determine the final cost.

A credit change order occurs when a change in the scope of work requires the contractor to issue a credit

against the contract. Credits happen for different reasons. A client may decide to reduce the quality of materials scheduled for installation. They may also choose to reduce the overall quantity of work done.

## **2. *Zero Cost Change Order***

A zero cost change order is similar to a lump sum change order. The primary difference between the two types is that the zero cost change order does not alter the contracted price for the project. The purpose of this kind of change order is to document a change in the scope of work regardless of whether there is a change in the scope of work.

Project owner's request changes to scopes of work. These changes may or may not affect the contract value. Changes in scopes of work should be documented regardless of whether those changes affect the contract value. If the scope of work is adjusted, but the value of the contract remains the same, the zero cost change order can be used to document the change order.

Scopes of work can be modified without affecting the price of the project. An example of this type of change would be a color change. A project owner may initially specify a darker color for cabinetry in a kitchen. After seeing the project take shape, the owner may decide to go for a lighter color. The zero cost change order is used to document this type of change.

## **3. *Time and Material Change Order***

Time and material change orders are used when the full costs of a change in scope cannot be determined. There are many instances within a construction project where a change in the scope of work is not foreseen or cannot be defined. Contractors may find deteriorated conditions after project demolition that require repairs before they can begin reconstruction. Attempting to estimate these costs may not be possible.

In these instances, the contractor will track their time that they spend addressing the change. They will also track materials purchased to treat the condition. They apply their labor rate to the time spent. Markup is applied to the material total to determine the final value of the change order. A project owner may request a breakdown of labor and material charges to justify the change order cost.

Factors affecting a time and materials change order should be negotiated as part of the original contract. Unmet expectations are one of the leading causes of a breakdown in change order negotiations. Approaching a project owner after the project is complete with a time and materials change order can lead to losing a customer. It is recommended that the factors affecting a time and material change order be negotiated as part of the original contract. Factors such as labor rate and material markup can be addressed in the context of the base contract.

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#### 4. ***Unitary Cost Change Order***

Unitary cost change orders are based on values listed in a unitary cost schedule. Contractors negotiate costs for additions to scopes of work that can be defined by specific units of measure. A unitary cost schedule allows project owners to control the cost of additional units of work where they may not be able to control the quantity of work. Project owners can negotiate the cost of additional units including the contractor's profit and markup ahead of the actual completion of work.

For these types of change orders, the contractor will track the work completed based on the unit of measure in the schedule. Roofing contractors use unitary costs for areas of work including decking replacement. Concrete contractors may have a unitary cost schedule for cubic yards of concrete poured.

As contractors build their businesses they will develop an understanding of the scopes of work that can be completed through unitary cost change orders. Unitary costs are used for the most common scopes of work that a contractor completes on a consistent basis.

Knowing when and where to apply each of these types of change orders is an important skill for contractors. Successful contractors know when and where to use the right tool to get the necessary results.

**Let's look at the following example of using construction change orders in a project setting.**

**Project:** A general contractor has been awarded a significant home improvement project. The project consists of a full renovation and major addition to an existing home. The contract value is \$175,000. The finished project will feature a new kitchen and upgraded landscaping package. The project is expected to take four months. The project is located in a northern climate area.

The general contractor signed this project in late September. He is interested in breaking ground immediately on the addition so that he can make watertight the shell before winter weather sets in. He signs his excavator to a contract and asks him to mobilize quickly. As the excavating contractor begins work he hits pockets of rock. The contract between the general contractor and the excavator has a rock clause. This rock clause gives the excavator the opportunity to issue a time and material change order for removal of the rock to the general contractor based on pre-negotiated rates.

The next phase of the home improvement project includes the replacement of the roof on the existing home. The homeowner wants to be certain that the roof systems for both the existing home and the addition match. The general contractor and roofing contractor agree to a contract that includes a unitary cost schedule for decking replacement. The roofing contractor removes the roof system on the existing home and finds deteriorated decking. He replaces the decking based on the agreed upon unitary cost schedule. The quantity of decking is tracked, and a unitary cost change order is issued to the general contractor for the additional work completed.

After the home is weatherproofed the general contractor begins the interior renovations. The project designer originally specified a dark cabinet finish for the kitchen. As the project unfolds the homeowner realizes that the natural lighting in the kitchen is less than expected. She decides that the dark finish on the kitchen cabinetry will not fit in with her expectations. She requests that the finish is changed to a

lighter color. The general contractor reviews the change and decides that there is no change in the contract value. He issues a zero cost change order to document the change in the cabinetry finish. The homeowner signs the change order to confirm the color change.

The final change order involves the exterior of the home. The owner originally requested that the exterior of the addition be clad with wood siding. After looking more closely at the maintenance requirements for wood siding, he decides that he would prefer another product that required less maintenance. The general contractor offers a cementitious siding instead of the wood siding. He provides a cost-plus change order based on the cost provided by his siding subcontractor. The homeowner decides to accept the change which results in an increase in the overall cost of the project.

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## **Tips for Increasing Effective Management of Construction Change Orders**

Using construction tools requires a basic knowledge. Knowing certain tips help increase the effectiveness of those tools. Here are a few tips to help contractors improve their efficiency in managing construction change orders.

### **1. *Develop Standard Change Order Templates***

Change orders can be a complicated process for companies to manage. Managers want to avoid reinventing the process each time a change order is needed. Reinventing systems and methods each time is a waste of time and resources for the company.

Contractors should take the time to create standard forms for their businesses. These forms can help managers oversee the change order process. Forms help support standardized systems and processes for business. They allow systems and processes to be repeated on a consistent basis.

It is recommended that companies without a conventional process start with two primary forms. The first form tracks costs associated with construction change orders. The tracking form is used for tracking time and material costs. These forms can also track unit amounts related to unitary cost schedules.

The second form is a standardized proposal form. It is best to call out change orders separately. The form should reference the original contract and how the change order will impact the contract value. Providing a change order form that references the base contract may also allow the terms and conditions for the base contract to cover the change order.

## ***2. Take Photos of the Change Order Conditions***

Construction site conditions change rapidly throughout the course of the project. Individual trades can encounter unforeseen conditions that may require immediate reaction. If these actions need to occur without the approval of the project owner the contractor needs to document those changes. Photographs are one of the best ways to document the needs to show the project owner.

For example, a commercial roofing contractor may encounter deteriorated decking during the tear-off process. There are many reasons including employee safety as well as impending weather conditions that may require a contractor address the situation immediately. He may not be able to wait for the approval from the project owner. As a result, the photographs can be used to document and share the need with the project owner.

Photographs can help support a contractor's claim for a change order. Change orders without photographs can be easier for a project owner to deny when compared with change orders that are submitted with photos.

## ***3. Incorporate Language Into Your Contracts and Proposals That Reference the Construction Change Order Process***



There are different options available for contractors when developing their contracts. Most projects involving a professional designer may be on an [AIA contract](#). Some general contractors may choose to use contracts drawn up by other trade associations. [AGC](#) (Associated General Contractors) provide contract templates for their members. Project owners may develop agreements that are unique to their businesses. Approvals may also come through purchase orders.

It is recommended that contractors develop contracts for their business. As opportunities develop, contractors will typically submit a proposal to their customers. These proposals can double as the contract for the project if the client can sign and approve them. Contracting companies may also have an additional contract that is separate from the proposal. In either case, it is strongly recommended that the document incorporate language regarding construction change orders.

Contractors also use contracts to govern their subcontractor relationships. It is recommended that contractors who use subcontractors use a written agreement to manage the relationship. A portion of this subcontract should stipulate how the change order process will be handled. The subcontract will help to reduce the chances for a dispute that may arise as a result of the subcontractor not understanding the change order process.

Successful contractors should consult with legal counsel when developing contracts. Attorneys that focus on the construction industry and contract law will be valuable advisors for contractors.

#### **4. *Get All Change Order Requests and Approvals in Writing***

Construction sites are known as the peacetime equivalent of war. Activity is taking place constantly. From the outside, it appears to be chaos. In most cases, the chaos is controlled.

As projects unfold, there is a lot of activity. Managers on construction sites are busy. They have multiple problems that flood their day. They attempt to address these problems quickly and efficiently. These same

managers are also human, and they are just as capable of making a mistake or forgetting something.

Managers on project sites need to solve problems quickly. Subcontractors can be asked to address a problem. And the manager can forget that they requested to have the issue resolved. If the subcontractor completes the work and attempts to invoice the change order, they may get denied. The manager requesting the work just forgot that they asked for the work to take place.

The best policy for contractors is to get the request for the change order in writing. Any approval of the proposed work should be documented. If the change order cannot be documented, it is important to note the time and date of the request.

## **Managing Construction Change Orders: Ethics**

Change orders are defined as a document that outlines changes to an established contract. Most construction projects start with an established written agreement. As the project unfolds changes occur. Construction change orders are the tool for managing the changes that occur as a project unfolds.

A construction change order signals a change in the path of a project. These changes are usually small and do not have a severe impact on the overall project. Each change to the contract needs to be managed ethically so that the best interests of both contracting parties are maintained. The contractor receives fair compensation for their work, and the project owner pays fair market value for the work being completed.

Contractors have an ethical responsibility to manage the change order process in a responsible way. As with any other tool, change orders can be used in an unethical manner. Successful contractors maintain a high degree of ethics when managing the construction change order process.

John Maxwell was asked about his thoughts on business ethics. His response was “There’s no such thing. There’s only ethics.”

As Dr. Maxwell shares there are not a set of business ethics that are separate from personal ethics. Individuals are either ethical or they are not. Contractors need to practice ethics in every aspect of their business including the change order process.

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