



Demonstrating Entitlement for Contract Change Orders and Claims

Stephen P. Warhoe, Ph.D., P.E., CCP, CFCC

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1. INTRODUCTION

Based on research and nearly 40 years of experience in the engineering and construction industries, this author has found that one of the most common causes of disputes between owners and contractors is failure by the claimant, typically the contractor, to adequately demonstrate entitlement to additional costs and project time resulting from scope changes and other causes. The common vehicles used to identify and demonstrate these entitlements are change order requests and, if necessary, claims.

This article discusses the elements of a contract change that should be established to successfully demonstrate entitlement to a change order or claim. It is written not by a legal scholar but from the viewpoint of an experienced construction practitioner who has held several construction management roles on construction projects and has researched, analyzed, and testified a multitude of times on disputed construction management, delay, and cost-related topics.

The purpose of this article is to help contractors and owners better understand the hurdles that must be overcome to increase the likelihood of attaining a mutual agreement on contract changes that are experienced during any phase (engineering, procurement, or construction) of a project. To reach an agreement on the terms of a change order,¹ it is paramount that the contractor convincingly demonstrate to the owner with reason its entitlement to a requested change. These demonstrations of entitlement apply regardless of the contract delivery methodology implemented.

It is important for all parties to a contract to understand the contract provisions, as well as laws, regulations, and standards that govern the contract. It is also recommended that an attorney be consulted to review the change management process of a contract including the terms defining the claimant's responsibilities necessary to demonstrate entitlement to requested change orders or claims.

¹ Another frequently used name for a Change Order, especially in government contracting, is a Variation Order. The terms can be used interchangeably in this article.



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2. CHANGE ORDERS, CHANGE ORDER REQUESTS, AND CLAIMS

In the context of an engineering and construction project, change is defined as an “alteration or variation to a scope of work and/or the schedule for completing the work.”² However, changes can include more than alterations or variations to work scope. Changes can also include revisions to contract terms, sequences of work, work conditions, and other administrative revisions. A change may be directed by the client or discovered to be necessary due to facts and circumstances that are identified during the project.

Typically, construction contracts contain provisions that address changes to contract terms. The contract terms most often affected during project execution are scope of work, budget, and timeline. Usually, one of these factors cannot be impacted without impacting one or both of the others.

The contract tool used to document a legal change to a contract is commonly known in the construction industry as a change order. According to AACE International, a change order is defined as:

*A document requesting and/or authorizing a scope and/or baseline change or correction. 1) From the owner’s perspective, it is an agreement between the project team and higher authority approving a change in the project control baseline. 2) From a contractor’s perspective, it is an agreement between the owner and the contractor to compensate for a change in scope or other conditions of a contract. It must be approved by both the client and the contractor before it becomes a legal change to the contract.*³

A change order signed by all parties to a contract change typically signifies that both parties agree to the terms of the change, including, but not limited to, scope, budget, and timeline (schedule) revisions. A caveat to this statement occurs when one or both parties sign the change order document but add wording noting an exception or reservation of certain rights. When this occurs, both parties should consult their legal counsel.

The process of attaining an acceptable change order typically begins when the contractor submits: 1) notice documentation to the owner indicating that it has identified a changed condition (scope or issue affecting project cost or schedule), whether directed by the owner or not, and thereafter, 2) a document containing the information necessary to demonstrate entitlement to the added costs and/or project timeline. The contractor’s need to provide notification to the owner is discussed

² AACE International, Recommended Practice 10S-90, “Cost Engineering Terminology,” 18 February 2022, p. 23 of 134.

³ *Id.*, p. 24 of 134.



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later in this article. The latter documentation, often known as a change order request (COR), is defined as:

*A proposal from a claimant concerning a requested change to the contract's compensation amount or payment terms, time of completion, product or performance specification, or other terms within the contract.*⁴

The COR is the most important element of the change order process, as it should demonstrate entitlement to the resulting costs and project delay related to the change. If the owner disputes any element that the contractor identifies in the COR, the contractor can either negotiate with the owner towards a mutually acceptable change order or submit its requested contract change as a claim. The elements necessary to demonstrate entitlement for a contract change remain the same if the COR escalates to a claim. A claim is generally defined as:

*A demand or assertion of rights by one party against another for damages sustained under the terms of a legally binding contract. Damages might include money, time, or other compensation to make the claimant whole.*⁵

Typically, once a disputed COR has been submitted as a claim, the resolution process rises to higher levels within both parties' organizations and the parties may enter into the dispute resolution process established in the contract.

⁴ AACE International, Recommended Practice 120R-21, "Demonstrating Entitlement for Contract Change Orders or Claims – As Applied in Engineering, Procurement, and Construction," 9 April 2022, p. 3 of 12.

⁵ AACE International, Recommended Practice 10S-90, "Cost Engineering Terminology," 18 February 2022, p. 24 of 134.



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3. THE ELEMENTS NECESSARY TO DEMONSTRATE ENTITLEMENT

Prior to signing a contract, it is highly recommended that the owner and contractor meet and review the terms (with their counsel) to ensure there is mutual understanding of the terms, including the change management process. The intent of this meeting should be to eliminate any miscommunications or misunderstandings during project execution.

It is recommended that the elements that should be demonstrated in a contract COR, and the extent to which they should be described, be agreed upon before the contract is signed and work commences. Experience has shown that one cannot go into projects assuming a perfect world whereby the owner and contractor have equal understandings in this regard. Because the potential stakes associated with disputed changes can be significant, many disputes can be avoided with this common understanding established well before the project begins. To deal effectively with the changes that might arise on a project, the project participants should have established a common understanding of what elements must be included in a contract COR and the expected level of detail in defining each. A facilitated alignment session at the start of the project is a good way to bring such expectations into common agreement.⁶

The burden of demonstrating entitlement to a change usually falls on the party that is making the associated claim. A contractor and owner should typically consider the following seven elements when a claim for entitlement to a revised budget or schedule is submitted:

1. Causal event occurrence;
2. Adherence to contract change notice requirements;
3. Contractual entitlement to request a contract change or make a claim;
4. Causation;
5. Prudent effort to mitigate any impacts;
6. Assignment of responsibility; and
7. Quantification of impacts.

AACE Recommended Practice 120R-21, “Demonstrating Entitlement for Contract Change Orders or Claims – As Applied in Engineering, Procurement, and Construction,” describes these elements.⁷

⁶ AACE International, Recommended Practice 120R-21, “Demonstrating Entitlement for Contract Change Orders or Claims – As Applied in Engineering, Procurement, and Construction,” 9 April 2022, pp. 3–4 of 12.

⁷ *Id.*, pp. 5–9 of 12.



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The Recommended Practice also describes and discusses below each element necessary to demonstrate entitlement to a change:

1. Causal Event Occurrence

It may seem hard to believe that there is a need to prove that a change event has occurred, but disputes have centered around this question. If an event, unanticipated by the contractor, adversely impacts its budget or schedule during project execution, the contractor must demonstrate that the event occurred. This demonstration must take place before any other facets of the change order request should proceed.

It might seem obvious that an owner-directed change is a clear cause for a change, but this is not always a mutually accepted truth. For example, many disputes occur because what the contractor considers to be a clear scope change directed by the owner that impacts its budget and/or schedule is considered by the owner to be an insignificant scope or design “clarification” that should not impact the contractor.

A simple and common example of a contractor’s need to demonstrate that an event occurred relates to impacts associated with adverse weather conditions. Based on the project site location, the contract might specify what type of weather the contractor should anticipate at any point during the project timeline including the frequency, intensity, and the weather data sources. Such a weather specification should cause the contractor to build contingencies into its budget and schedule to address anticipated weather events. However, during execution of the project, the contractor may experience an adverse weather event more severe than what the contract contemplated or local weather records indicate is typical. In this case, the contractor should document and submit to the owner a narrative concerning the weather event and its severity compared to what was anticipated prior to the start of any further entitlement discussions.

To demonstrate a weather-related impact, the contractor would typically have to support its claim using local weather records to demonstrate that the change was beyond what either party anticipated. If the contractor does not use weather records, the risk of a dispute over the severity and impact of the weather event is likely to increase significantly.

2. Adherence to Contractual Change Notice Requirements

Typically, construction contracts require that once a contractor has identified a potential changed condition, it has a specified number of days to provide notice to the owner that



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the changed condition may result in a change order request. Among the reasons for submitting timely notification are the following:⁸

- *Provides the owner a chance to examine the actual conditions on-site or investigate the issues under examination at the time of their occurrence;*
- *Gives the owner a better chance to mitigate the potential adverse effects of the issues under examination (e.g., delay-causing events, adverse conditions, previously unknown site conditions, or changes to the scope);*
- *Provides the owner with an opportunity to explore more reasonable and/or less costly options, and possibly change its work plan by:*
 - *Modifying the design to avoid or otherwise better manage pertinent risks;*
 - *Requesting the contractor to provide a proposal or change order request to execute the changed work;*
 - *Identifying changes such as change in the contractor's means and methods or to exclude certain work elements from the contractor's scope of work; and*
- *Provides the owner with an opportunity to adjust its budget and pursue additional funding opportunities as needed.*

There may be continuing notice obligations to keep the client updated if the change event occurs over a significant length of time. For example, with respect to notices of delay, sometimes it takes months for a delay event to run its full course and the contractor to acquire the necessary data to support its claim. In this case, contracts may require that the contractor submit monthly or more frequent updates to the owner that inform on the status of the delay event.

3. Entitlement to Request a Change

This element relates to the contractor's contractual right to request a change to the contract. Sometimes contracts specify what types of changes a contractor can or cannot request. For example, some contracts specify that the contractor cannot seek delay-related costs even if the owner agrees that it was responsible for a delay.

Using the adverse weather example again, construction contracts often indicate that the contractor should be familiar with the project site climate conditions at all times of the year

⁸ *Id.*, p. 6 of 12.



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with respect to potential impacts to the project schedule and other costs. This type of statement indicates that the contractor cannot request an adjustment resulting from a climatic event that it should have anticipated as a possible occurrence based on historical weather records.

The contractor should seek legal counsel regarding this element to ensure a full understanding of what changes can and cannot be requested.

4. *Demonstration of Causation*

In general, demonstrating causation means demonstrating there was a cause-and-effect relationship between a change event and the resulting impact. Successfully establishing a causal link should be straightforward if the contractor has maintained complete, accurate records that are appropriate to the project size and complexity.

However, several construction industry studies indicate that demonstrating a cause-and-effect relationship between an event and its impact to a contractor's budget or schedule is the single most difficult element for a contractor to demonstrate. There are two primary reasons for this difficulty. The first is that contractors typically do not understand the importance of demonstrating causation and, therefore, do not spend enough effort on it or keep adequate, accurate records to support it; and second, determining whether a contractor has successfully demonstrated a causal relationship can be contentious because it can come from two subjective and opposing perspectives. If the parties are significantly misaligned on whether causation has been demonstrated, a judge or arbitrator may need to decide.

AACE International has identified the most common root causes that lead to change order requests on construction projects. They are as follows:⁹

- ***Design Modifications*** – *These involve revisions to the contract drawings and specifications on a project, and they are usually initiated by the owner, the owner's representative or the owner's engineer. It should be noted that if the owner initiates a revision to any aspect of the design before it has been completed, the designer may be entitled to additional costs and/or a time extension. This point is especially important on a project that is delivered using the design/build methodology, also known as EPC, because in addition to the impacts that may affect the designer's ability to complete on time and under*

⁹ AACE International Recommended Practice 100R-19, "Contract Change Management – As Applied in Engineering, Procurement, and Construction," 27 February 2020, pp. 7 and 8 of 18.



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budget, the design modifications may also affect procurement, construction costs and schedule depending on what point in time of the project the change occurred.

- ***Errors and Omissions*** – *These address the items that are determined to be defective or missing in the contract set of drawings and specifications. Several studies reveal that on construction projects that use the traditional design-bid-build delivery process, design errors and omissions generally account for the primary cause of change orders.*¹⁰
- ***Changes to Means and Methods*** – *These occur when the owner or outside agencies impact the contractor’s planned means and/or methods for executing the work.*
- ***Changed Conditions*** – *These reflect actual physical conditions encountered but were unforeseen and materially differed from the conditions that were identified in the contract documents or were conditions not normally found in the area of the project site.*
- ***Additional / Reduced Work Scope*** – *At the owner’s discretion, the contract scope of work may be expanded as a result of enhancements to the design or may be reduced because of budget considerations and value engineering.*
- ***Owner-Directed Schedule Acceleration or Slowdown*** – *Based on the owner’s directive to modify the contractor’s planned performance on a project, the contractor may incur additional costs and expenses when the scheduled project performance is accelerated or delayed. In addition, if the contractor does not receive justifiable time extensions for excusable delays, it may require that the contractor accelerate the work to compensate for the delays in order to meet the contractual milestone dates.*
- ***Work Sequencing*** – *This change is a result of the owner’s requirement to revise the contract’s planned sequence for completing the work tasks on a project. The owner’s directive may impact the contractor’s scheduled and available labor, material, and equipment, as well as the contract time for completing a project.*
- ***Adjustments to the Unit Pricing*** – *This change is based on cost overruns that result from revisions to the contract unit prices. Increases in a contract item*

¹⁰ See Warhoe, Stephen P., “Applying Earned Value Management to Design-Bid-Build Projects to Assess Productivity Disruption: A System Dynamics Approach,” 2012, § 2.4.2.



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budgeted quantity or material item budgeted quantity are the most common reasons for an adjustment to a unit price.

- ***Force Majeure Delays*** – *These generally include extensions to the project schedule based on events for which neither the owner nor the contractor is accountable or have the ability to control, such as: acts of God, strikes and labor disputes, and unusual weather-related delays.*
- ***Added Cost Incentives*** – *These are implemented by the owner to encourage the contractor's participation in value engineering on a project or to entice the contractor to accelerate the completion of a project.*
- ***Delayed, Denied, or Restricted Access to a Project Site*** – *This occurs when a contractor is unable to fully access a project site due to the owner's inability to grant access or obtain the necessary permits.*
- ***Inappropriate Rejection of the Contractor's Work*** – *This is based on the owner's incorrect rejection of work elements that were completed by the contractor. A change order may be appropriate if subsequent investigation indicates that the work completed was acceptable and in accordance with the terms and conditions of the contract.*
- ***Delays to Owner-Supplied Services and Materials*** – *These are impacts to a project schedule resulting from the owner's inability to provide the services, permanent materials, and/or equipment within a timeframe that is consistent with the requirements defined in the contract.*
- ***Owner Interference*** – *This results from the owner directing subcontractors, sub-consultants, or vendors without direct contractual authority (bypassing the prime contractor).*

Because causation is the most difficult element for a contractor to demonstrate, it is highly recommended that contractors and owners pay particular attention to making and maintaining accurate and complete records throughout a project.

Using the same adverse weather example, the contractor would have to demonstrate to the owner that a rainstorm that occurred was not only unanticipated based on what was identified in the contract documents but was so severe that the impact caused the additional costs and schedule days requested by the contractor.



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5. Prudent Effort by the Contractor to Mitigate Any Impacts

Commonly, contracts specify that both parties have a duty to mitigate the impacts of a change. Even if the contract does not specifically require that both parties attempt to mitigate impacts resulting from a changed condition, it is logical that completing the project as cost and time-efficiently as possible is to the project's benefit. If a contractor intends to request a change order for impacts resulting from a change, the owner will typically request that the contractor demonstrate the mitigation efforts it performed and show the resulting effects. It is recommended that a contractor confronted with a changed condition make its best efforts to expend the least amount of cost and time necessary to mitigate the potential impacts. Oftentimes, construction contracts contain clauses that require the contractor to demonstrate that it mitigated, or prudently attempted to mitigate, the impacts of any adverse changes or events. Providing evidence that the contractor acted to avoid or mitigate the impacts should indicate to the owner that the COR resulted only after the contractor did its best to reduce cost and schedule impacts.

According to AACE:

By identifying and performing impact avoidance or mitigation efforts resulting from a changed condition to the project typically indicates the contractor did what any prudent contractor should do. These efforts should also demonstrate to the owner the contractor's intentions to collaborate with the owner with respect to completing the project as efficiently as possible from a cost and schedule perspective.¹¹

6. Assignment of Responsibility

In conjunction with proving the previous elements, the contractor must demonstrate that responsibility for the damages it experienced or will experience rests entirely with the owner. For owner-directed changes, responsibility for the change may seem clear to the contractor, but assignment of responsibility is not always clear.

For example, responsibility for delays that the contractor experienced resulting from an owner-directed change may coincide with a concurrent delay that the contractor caused. When there is concurrent delay, this typically results in the contractor receiving a time extension but not any associated time-related costs.

¹¹ AACE International Recommended Practice 120R-21, "Demonstrating Entitlement for Contract Change Orders or Claims – As Applied in Engineering, Procurement, and Construction," 9 April 2022, p. 8 of 12.



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7. Quantification of Impacts

It is important to show that all requested costs and extensions of time are adequately supported and are reasonable. Although being supported and reasonable can be subjective, it is important that the contractor can provide the documentation and analysis to adequately demonstrate the cost and schedule impacts that were incurred as a result of a change.

To determine its time and cost impacts, the contractor must have set up the project infrastructure to do so. This means that the contractor should have established cost and schedule management processes and a document control system, which should be properly managed and maintained during the project. Among the processes that the contractor should have established are accounting, cost tracking, labor tracking, and schedule management systems. An adequate work breakdown structure (WBS) that ties together the data from all these systems should also be developed. The document control system should include the collection and organization of documents for all potential contract changes. If any of these systems are not adequately established and maintained, the risk increases that the contractor will not successfully recover time extensions and damages that it should be entitled to recover.

Often, contracts are silent on or poorly describe what documentation is necessary to support the damages or time requests in a change request or claim. Therefore, it is important for the contractor to provide as much relevant detail as possible to support all additional cost and time impact requests. It is also important that the contractor coordinate with the owner on its expectations for what it deems to be a reasonable and supportable request.

The amount of documentation necessary to support a contract change request or claim should be scalable to the complexity of the project and the issue being evaluated in the change. Photos, tables, and diagrams can further support a requested change order.

Within its change order request or claim, the contractor should be truthful and take responsibility for problems it has caused, which often requires that the contractor allocate to itself certain delay and costs that were incurred. Ignoring or deflecting these problems only causes an owner to question the reasonableness of the request. The results could be disastrous if it is found that the contractor misrepresented the facts to a disputed change request or claim.



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4. SUBMITTING THE CHANGE REQUEST PACKAGE

The change request submission should be complete and address all seven elements needed to demonstrate entitlement. The package should include a narrative that not only explains and demonstrates the seven elements but also explains how the submittal package is organized, especially if there are many supporting documents.

It is important to note that all seven of the above demonstration elements are interrelated. That is, all play a role with respect to demonstrating entitlement to a requested change or claim, and nearly all rely on other elements being demonstrated before proceeding to the next element. According to ACE:

*Each of the seven elements are inter-related and, in some way, may affect the contractor's ability to demonstrate the other elements. For example, causation cannot be determined until the causal event has been identified as having occurred, and responsibility cannot be determined without understanding what caused the change, when it occurred, and legal entitlement has been demonstrated.*¹²

ACE also notes, "The contractor's COR or claims submission should be based on facts and avoid attempting to rely on opinions or other information that is not fact-based."¹³

Lastly, it cannot be emphasized enough that both parties to a contract should keep and maintain good documentation throughout the life of a project. ACE notes:

*... determining responsibility for a change and its resultant impacts can be difficult to establish retrospectively as a result of poor project documentation, especially when: a) a change was not specifically directed by the owner, b) occurrence of the causal event cannot be established, or c) when causation cannot be clearly determined.*¹⁴

When all parties to a construction contract keep and maintain detailed project documentation, this will significantly reduce the risk of any misunderstandings or debates later and should result in an amicable resolution to all contract changes during and after project execution.

¹² *Id.*, p. 10 of 12.

¹³ *Id.*, p. 11 of 12.

¹⁴ *Id.*, p. 9 of 12.



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About the Author



Stephen P. Warhoe, Ph.D., P.E., CCP, CFCC, is a Senior Principal with Long International and has a proven background in the planning, control, and management of multiple major design and construction projects. With over 35 years of experience in the project controls and project management fields, he is a recognized expert in the areas of schedule delay analysis, productivity loss, project controls, and construction dispute avoidance and resolution. Dr. Warhoe is an expert in retrospective CPM schedule delay analysis, productivity loss, and damage calculation. He also specializes in system dynamics and wrote his Ph.D. dissertation on “Applying Earned Value Management to Design-Bid-Build Projects to Assess Productivity Disruption – A System Dynamics Approach.” The recognition for his expertise and respect in the project controls field culminated with his election as President of AACE International during 2008–2009 and becoming an Honorary Life member in 2019. Additionally, with his extensive experience in schedule and cost control, he continually demonstrates his value to clients having planned and controlled multibillion-dollar budgets and schedules. He is also skilled in the negotiation, audit, evaluation, and administration of contractor, consultant, vendor, and service contracts. Dr. Warhoe is based in the Seattle, Washington, area and can be contacted at swarhoe@long-intl.com and (206) 451-4320.