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# **The Cumulative Impact Claim: Where Do We Stand In 2010?**

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# The Cumulative Impact Claim: Where Do We Stand in 2010?

## 1.0 From Change Order to Cumulative Impact Claim

Construction contracts generally contain a Changes clause.<sup>1</sup> This clause allows the owner the right to change the contract within certain limits, the contemplated purpose under the agreement. In larger complex construction projects, such as stadiums, arenas, malls and hotel gambling complexes, there may be multiple changes on the project. When these multiple changes act in sequence or concurrently, there can be a synergistic effect upon the base work. This synergistic effect may be difficult to comprehend. "Cumulative impact" is the disruption that happens between two or more change orders and basic work, but does not include local disruption directly attributable to a specific change order.<sup>2</sup> The key notions with the cumulative impact claim are (1) the unforeseeability of the impact on productivity caused by a large number of changes and (2) whether the change order language constitutes a waiver or reservation of this claim.<sup>3</sup>

A cumulative impact claim does not logically have to equate to a cardinal change in the contract. A "cardinal change" occurs when the owner's change alters the contractor's terms of performance to such an extent that the scope of performance is beyond the original contemplated scope of work of the parties.<sup>4</sup> Change orders can be by agreement [formal] or constructive (and/or cardinal change orders). The agreed change order is usually in writing and signed by both parties. A constructive change order results from the act of the owner that should reasonably result in an equitable adjustment.<sup>5</sup> A cardinal change, either formal or constructive, is "one that fundamentally alters the contractual undertaking of the contractor, it is not comprehended under the normal changes clause."<sup>6</sup> In contradistinction, the cumulative impact claim is the aftermath of the inability of the contractor to accurately account for all impact costs resulting from the multiplicity of change orders. In other words, the multiple changes that produce the unforeseeable synergistic effect leading to a cumulative impact claim may or may not be changes that alter the fundamental nature of the contract.

In analyzing cumulative impact claims and cardinal change breaches, we do in fact examine similar issues. We examine the understanding or contemplation of the parties. When the contractor signed the multiple separate change orders, did the contractor contemplate all of the impacts that these changes would cause? It is understandable why some courts confuse the cardinal change notion with the cumulative impact claim presentation. In *L.K. Comstock & Company, Inc. v. Becon Construction Company, Inc.*,<sup>7</sup> the court in extending the doctrine of federal government contract law to apply as state law in Kentucky noted that "under the contract doctrine of 'cardinal' change that where a party to a contract alters the terms of the other party's performance to such an extent that the alterations could not have been within the realm of the parties' contemplation as evidenced by the parties' written agreement, the other party may elect not to perform and hold the other party liable for breach."<sup>8</sup> The difference between the analysis of the cumulative impact claim and the cardinal change breach is what is being examined. The focal point of inquiry in analyzing the cardinal change is whether the

change was or was not a logical extension of the base contract, i.e., whether the change was beyond what the parties had agreed was the scope of work. The focal point of the cumulative impact claim is not whether the changes fundamentally altered the contractor's contractual undertaking, but whether the sheer magnitude of the number of changes presented an unforeseeable impact upon the base work.<sup>9</sup>

In order to establish a cumulative impact claim, the contractor will need to demonstrate to the court or board that the change order procedure contemplated by the contract did not adequately take into consideration the cumulative impacts caused by the multiple change orders. The contractor will have to establish that the impacts caused by the multiple changes were unforeseeable.<sup>10</sup>

The focal point on most cumulative impact claims will be on the issue of waiver or reservation under the express language of the change order.<sup>11</sup>

## **2.0 Overview of the current and historic developments in case law.**

The “cumulative impact” claim was discussed over eighteen years ago in *Pittman Construction Company, Inc.*<sup>12</sup> Ironically this fine city of New Orleans was the site of the project that gave rise to this decision. Pittman Construction Company, a federal government prime contractor, sought equitable adjustments on behalf of the electrical and plumbing subcontractors for delays and disruptions allegedly suffered in the construction of the Federal Office Building, Courthouse and Parking Facility in New Orleans, Louisiana. Pittman contended that as a result of 206 contract changes, its subcontractors sustained uncompensated impact costs.<sup>13</sup>

This review of a General Services Administration Board of Contract Appeals [GSBCA] decision in *Pittman*<sup>14</sup> provides a good framework to analyze what boards and courts perceive to be a “cumulative impact” claim. This board considered the claims in context of a “direct impact” claim and a “cumulative impact” claim.<sup>15</sup> As to the “direct impact” claim, the board noted that of the 206 changes on the job, 152 represented added work and only 11 of these exceeded \$50,000. Only two were entirely related to electrical work and none were singularly related to mechanical work. Five resulted in time extensions for a total of 102 days.<sup>16</sup> Pittman argued that the changes were excessive and caused delay and disruption, making the job more costly. The GSBCA described “direct impact” costs as the “change-related cost increases to unchanged work.”<sup>17</sup> The contractor tried to reserve the right to assert impact claims caused by a change at the time of the change. The contractor differentiated between costs for immediate payment which it referred to as “the usual cost elements such as labor, material and normal markups” and more remote expenses including “changes in the sequence of work, delays, disruptions, rescheduling, extended overhead, overtime acceleration and/or impact costs.”<sup>18</sup> The contract officer insisted that these additional remote items be priced at the onset of the change and not reserved. The board agreed and granted the government summary judgment. It appeared to the board that the contract officer was willing to negotiate direct impact costs and that some change-order pricing did provide allowance for extra labor for out-of-sequence work. More importantly, the board concluded that Pittman’s withdrawal

of its reservation of rights letter constituted acquiescence in the contracting officer's position that all direct impact costs would be pricing at the beginning.<sup>19</sup> In leading to the "cumulative impact" claim discussion, the board noted that the contractor had sent four subsequent letters claiming a "disability in its attempted pricing of delay costs" which the board considered sufficient only to preserve a claim for indirect impact costs. The board concluded that these letters did not constitute a reservation of rights to negotiate at a later time under the Changes clause, but only could be utilized in a judicial pronouncement through board action.<sup>20</sup>

In attempting to define these "indirect impact" or "cumulative impact" costs, the board provided the following explanation:

"[C]osts . . . [which] addressed the inefficiencies and disruptions associated with changes which, when viewed cumulatively (i.e., retrospectively), were so large in number and/or magnitude as to give rise to a separately compensable impact claim. The term "ripple effect" has also been used to describe such impact costs."<sup>21</sup>

In denying this "cumulative impact" claim, the board differentiated this case from *Ingalls Shipbuilding Division, Litton Systems, Inc.*<sup>22</sup> It noted that although the present case had 206 changes, the number and dollar value of the changes were insufficient to support a cumulative impact claim. The board noted that in *Ingalls Shipbuilding* where a cumulative impact claim was allowed, there had been three contracts affected by several thousand change orders resulting in a 58% increase in contract price and a 4-year delay. In the present case the increase in contract price was 12% and the extension 102 days on a 1000-day original performance schedule. Based on this comparison alone, the board noted that "no fundamental change in the character of the work had taken place and thus no costs had been experienced whose likelihood had not been foreseeable."<sup>23</sup> The Claims Court did not agree or disagree with the board's definitions and standards for a cumulative impact claim, and simply sustained the board's decision based on the finding that Pittman had itself deviated from the planned construction sequence and consequently, where both parties contributed to the delay, neither could recover unless there was proof of clear apportionment.

The board decision is often examined by scholars to establish a framework for defining "cumulative impact" claims.<sup>24</sup> In *Pittman*, the GSBICA noted the difference taken in earlier decisions took two different approaches as follows:

1. Cumulative impact rising to the level of a cardinal change or one that fundamentally changes the contemplated scope of work.
2. Cumulative impact that is greater than the sum of the changes underlying it yet not of such a magnitude as to constitute a cardinal change.<sup>25</sup>

Unfortunately over the past two decades, the boards and courts have not been able to assist the industry in clearly defining "cumulative impact" beyond what was expressed in *Pittman* and have continued to struggle with the necessity of proving a "cardinal

change" as predicate for recovery. However, it is instructive to review different definitions of cumulative impact to derive the essence of this type of claim. Some of the more notable case definitions are as follows:

1. Cumulative impact costs are "costs associated with impact on distant work, and are not as readily foreseeable or, if foreseeable, as readily computable as direct impact costs. The source of such costs is the sheer number and scope of the changes to the contract."<sup>26</sup>
2. The source of cumulative impact loss is not simply "a series of mere isolated hardships, but rather the gestalt principle of many problems occurring concurrently—with devastating impact on performance greater than the numerical sum of the parts."<sup>27</sup>
3. Using the term cumulative disruption and local disruption, instead of cumulative and direct impact, "[l]ocal disruption' refers to the direct impact that changed work has on other unchanged work going on around it... '[C]umulative disruption' is the disruption which occurs between two or more change orders and basic work and is exclusive of that local disruption that can be ascribed to a specific change. It is the synergistic effect . . . of changes on the unchanged work and on other changes."<sup>28</sup>
4. "A critical condition precedent to the allowance of cumulative disruption costs . . . is a showing that they relate to excessive and frequent design or structural changes the impact of which were distant and unforeseeable during the pricing of proposals and negotiations for direct costs."<sup>29</sup>
5. Indicating numerosity of change orders or requests for proposals are not enough, one board noted that "the number of RFIs and changes alone is insufficient to establish the Government's liability for a contractor's inefficiency."<sup>30</sup>
6. "Cumulative impact need not be traced to specific causes of increased performance costs, but can arise from changes which, when viewed retrospectively, were so many and had such effect on performance that there is a separately compensable impact claim."<sup>31</sup>
7. "Cumulative impact is the unforeseeable disruption of productivity resulting from the 'synergistic' effect of an undifferentiated group of changes. Cumulative impact is referred to as the 'ripple effect' of changes on unchanged work that causes a decrease in productivity and is not analyzed in terms of spatial or temporal relationships. This phenomenon arises at the point the ripples caused by an indivisible body of two or more changes on the pond of a construction project sufficiently overlap and disturb the surface such that entitlement to recover additional costs resulting from the turbulence spontaneously erupts. This overlapping of the ripples is also described as the 'synergistic effect' of accumulated changes. This effect is unforeseeable and indirect."<sup>32</sup>

So where are we in 2010? This author/presenter is of the opinion that a cardinal change is an inappropriate requirement in any cumulative impact claim.<sup>33</sup> Proof of a fundamental alteration of the contract may be an additional theory of recover allowing

the contractor another route to recovery, but should not be a predicate for recovery under a cumulative impact claim. Certainly, if the owner has so fundamentally altered the contract that the contractor is entitled to claim a breach of contract, the contractor should be able to recover impact damages under a quantum meruit or modified total cost methodology.<sup>34</sup> Once a cardinal change has been demonstrated, this should, as has been suggested by Keating and Burke, “trump” any release in a specific change order.<sup>35</sup> But if we have the type of claim where the fundamental contemplated scope of the base agreement has not been altered, then the cumulative impact claim should just require “the issuance of an unreasonable number of change orders [that] creates a synergistic disruptive impact such that the total disruption caused by the changes exceeds the sum of the disruptive impacts caused by the individual change orders when looked at independently?”<sup>36</sup> The “cumulative” impact claim is a separate and independent claim.<sup>37</sup>

### **3.0 Analysis of the Elements of a Cumulative Impact Claim**

Like most contract and tort claims, the contractor should be deemed to have to prove (1) liability, (2) causation and (3) resultant injury.<sup>38</sup> The same is true for the cumulative impact claim. As stated in *Appeal of Centex Bateson Construction Co., Inc.*<sup>39</sup>:

"In looking at Dynalectric's cumulative impact claim, we must keep in mind the fundamental triad of proof necessary to sustain a contractor's recovery for a constructive change giving rise to cumulative impact costs: liability, causation, and resultant injury."

The elements of proof for a cumulative impact claim are as follows:

- A significantly large number of changes;
- The changes have impact on productivity (performance time and efficiency);
- The impact flows from the synergy of the number and scope of changes;
- The contractor was unable at time of pricing each change order or directive to foresee the ripple-type effect of the multiplicity of changes; and
- The contractor did not knowingly waive the right to assert cumulative impact claims when negotiating changes.

A major issue courts and boards seem to focus upon in denial of claims is causation.<sup>40</sup> These cumulative impact claims "are routinely denied because there were an insufficient number of changes, contractor-caused concurrent delays, disruptions and inefficiencies and/or a general absence of evidence of causation and impact."<sup>41</sup> One would naturally assume that causation is an extremely important element to have to be established in any construction-related claim. Notwithstanding, at least one decision suggests that in establishing a cardinal change, the only remaining issue is damages, that is to say that when the cardinal change is established both liability and causation elements are satisfied.<sup>42</sup>

Practitioners should consider causation in any event to be essential in proving a claim. In *David J. Tierney, Jr., Inc.*,<sup>43</sup> in a matter involving 44 change orders that

addressed some 133 separate items with multiple parts, the board in permitting the contractor to recover under a cumulative impact claim, the GSBCA stated:

"Principally, we find on balance that the Government's numerous changes to the contract impeded appellant's completion of the job, substantially increasing its costs and eradicating its anticipated profit. Although we are not able to pinpoint, day by day, the effect of each change on each item of work, we do find that some of those changes had a cumulative impact on job progress as a whole, for which appellant is entitled to compensation."

In this matter the award was not based upon any specific quantum associated with the contractor's individual claims, but rather, the award was in the nature of a jury verdict based upon a perceived balance of liability between the contractor and the government for overall delay in the completion of the construction project as a whole. Specific damages were not demonstrated to be causally related to the change orders. The GSBCA was unable to determine precisely when the compensable impact occurred, which portions of the work in fact were impacted, the severity of the impact, or which changes caused the impact.<sup>44</sup> However, on a project of damages were awarded.

In *Centex Bateson*,<sup>45</sup> the Veterans Administration Board of Contract Appeals expressed that proving causation in the cumulative impact claim is difficult "because the concept of cumulative impact is, in itself, somewhat amorphous."<sup>46</sup> Yet, the VABCA indicated that the contractor presenting a cumulative impact claim must still present the tribunal with a reasonable explanation of how the very large number of changes caused the claimed cost overruns.<sup>47</sup>

An alternative method of proving causation is establishing that no other grounds or reasons exist for the loss of productivity.<sup>48</sup> How exactly a contractor is realistically expected to prove to the tribunal that there were no contractor errors that led to the cost overrun which is claimed to be attributed to the multiple changes is not laid out in this VABCA decision.

The problem with this viewpoint is it really treats the cumulative impact claim as a "total productivity loss" claim. One commentator in analyzing the tendency of the courts to place emphasis on liability and damages and not causation states that by so doing, the courts and boards are really equating this to a "total time," "total cost," or "total productivity loss" claim.<sup>49</sup> If we look at a "total cost method" claim, the contractor may be required to establish: "(1) the impracticability of proving actual losses directly; (2) the reasonableness of its bid; (3) the reasonableness of its actual costs; and (4) lack of responsibility for the added costs . . ."<sup>50</sup>

The downside to this "total cost method" claims analysis is that the owner will likely be permitted to defeat the claim by proving the existence of disruptions caused by the contractor and no real ability to apportion between the Government/owner and the contractor.<sup>51</sup> Recall that in *Pittman Constr. Co. v. United States*,<sup>52</sup> the court concluded that the contractor being unable to separate the impact costs caused by the Government

and those caused by the contractor's deviations from the sequence of work resulted in the contractor's claim being defeated.

A review of state court decisions indicates that the cumulative impact claim approach has not been analyzed as an independent basis for recovery. In California, for example, where a guaranteed maximum price contract was being reviewed and the drawings at the time for bidding lacked sufficient detail and required months of extended revision drawing, the eventual changes that resulted made it impossible for the contractor to keep accurate cost records for the hundreds of changes.<sup>53</sup> The court noted that the numerous changes had a "dynamic impact" on the construction productivity.<sup>54</sup> However, the court further noted that the scope of work had been altered due to the excessive number of changes and invoked the cardinal change doctrine to allow a recovery to the contractor premised upon "the reasonable value of its services on a quantum meruit basis."<sup>55</sup>

In large casino/hotel complex projects and other projects wherein large numbers of changes occur, the utilization of guaranteed maximum price contracts is becoming prevalent and one can expect to see "cumulative impact" analysis employed in state court or arbitration proceedings when numerous change orders come about due to scope changes that take place following significant fast track design changes from the early concept drawings upon which the GMP contract was negotiated.

At least two commentators who have extensively reviewed cumulative impact claims law are of the opinion that it should not be necessary for the contractor to establish a cardinal change.<sup>56</sup> However, another commentator believes that if the "synergistic" cumulative impact claim is to be presented by the contractor, that a cardinal change should be demonstrated.<sup>57</sup> Respectfully, it appears that the cardinal change should be disassociated from a cumulative impact claim and the focal point should remain on the synergistic effect of multiple change orders upon the unchanged work. As a matter of fact, the emphasis by the courts should probably be focused more upon the language of the change order itself and whether the contractor knowingly waived the right to assert a cumulative impact claim.<sup>58</sup>

In *David J. Tierney*,<sup>59</sup> the government alleged that the contractor's cumulative impact claim should fail due to language in the change orders and the doctrine of accord and satisfaction. The board specifically found that the parties had never intended the negotiated changes to encompass cumulative, or indirect, impact costs. In reviewing specific boilerplate language, the board noted as follows:

"All of the remaining thirty-nine change orders contained boilerplate language, immediately above the total, agreed upon price, denying any time extensions. Change Orders 31, 32, 37, and 38 each noted, 'since this work will be performed after the Government's acceptance of the building for occupancy, it is not considered to be a basis for a time extension.' Appellant's Exhibits 137, 138, 139, 141. The other change orders contained the following boilerplate language, or a near equivalent:

It is considered that the performance of the work described can be accomplished concurrently with the work under the basic contract. Should you disagree, a detailed explanation of how the work will delay the overall project must be submitted with your quotation.

Appellant's Exhibits 101, 103-16, 118-20, 122-36, 142, 143.

Neither statement of boilerplate clearly indicates an intent by the parties to settle appellant's potential claims for cumulative impact costs, and therefore the change orders will not now bar those claims. In addition, despite the Government's argument concerning accord and satisfaction, Change Orders 10 and 42 at least demonstrate that the parties failed to view the latter piece of boilerplate as prohibiting claims even for direct impact. Although Change Order 10, which included changes to the hardware for front entrance doors, contained that boilerplate clause, the parties subsequently negotiated Change Order 42 as a "[s]ettlement of claim for time delay due ... to changing the hardware ... which in turn delayed the fabrication and installation of the entrance doors."

It is typical for the change order to include waiver or release language. The question is whether this language is sufficient to block the cumulative impact claim. Did the parties fully and knowingly negotiate away the cumulative impact claim? Boards are willing to examine broad waiver and release language and conclude that the parties did not specifically address impact costs in the change order negotiation process, thus allowing the cumulative impact claim.<sup>60</sup>

#### **4.0 Common Defenses Employed by Owner**

##### **4.1 Signed Change Orders Constitute "Accord and Satisfaction"**

The chief defense articulated in most cases by the owner to a cumulative impact claim is the waiver language contained in the signed change order. The argument advanced is simply that the contractor by signing the change order included any possible costs that could be associated with the cumulative impact claim. The legal defense is essentially "accord and satisfaction." The burden of proof on this defense is upon the owner.<sup>61</sup>

The contractor needs to show that the owner and contractor did not intend to negotiate and price the impacts derivative of the numerous changes on the job resulting in the cumulative impact claim.<sup>62</sup> Although reservation language is not mandated,<sup>63</sup> it is beneficial for the contractor to point to some reservation language in correspondence or otherwise, including in the change order itself, that impacts outside the specific change order were being reserved for future consideration and equitable adjustment.<sup>64</sup>

In *Bell BCI Company v. United States*,<sup>65</sup> the Federal Circuit Court of Appeals held that a contractor had not effectively released the government from liability for the

contractor's delay and cumulative impact claims, and the court indicated that the accord and satisfaction defense had not been adequately proven. The language reviewed by the court stated that the modification "provides full compensation for the changed work" and that the contractor "hereby releases the Government from any and all liability under this Contract for further equitable adjustment attributable to the Modification." To establish an accord and satisfaction defense, the court required proof of (1) proper subject matter, (2) competent parties, (3) meeting of the minds, and (4) consideration.<sup>66</sup> Here, the court concluded that no money was paid for a release of specific cumulative impact claims and there was no meeting of the minds as to a release of such claims. The court indicated that express release language and consideration would have to be demonstrated. "Any and all" was not deemed sufficient language to release this specific type of claim. There were approximately 700 EWO's and \$21.4 million in change orders on a \$63.6 million project. The 34% increase in contract price was considered of such magnitude to be unusual for construction projects.<sup>67</sup>

Yet, in *Jackson Construction Co., Inc. v. United States*,<sup>68</sup> the following clause was upheld under the defense of accord and satisfaction:

The contract period of performance remains the same. It is further understood and agreed that this adjustment constitutes compensation in full on behalf of the contractor and his subcontractors and suppliers for all costs and markup directly or indirectly, including extended overhead, attributable to the change order, for all delays related thereto, and for performance of change within the time frame stated.

The court explained the difference between a release defense and an accord and satisfaction defense on cumulative impact claims. It noted that a "release constitutes no condition precedent to discharge by accord and satisfaction."<sup>69</sup> It further noted that the court with accord and satisfaction had to focus on the intention of the parties and whether there was a meeting of their minds. It explained that with a release, the court could "void or reform the release on several grounds, including lack of consideration, lack of performance, lack of authority, unilateral or mutual mistake, misrepresentation, duress, or under other circumstances in which the parties' conduct evinces an intent to allow additional claims."<sup>70</sup>

#### 4.2 Contractor Should Have Been Able To Track Changes and Accurately Estimate Impact Changes

Particularly, when the contractor has made prior claims for cumulative impact damages, it can be reasonably contended by the owner that the contractor should have been able to track the changes and to have accurately estimated the impact changes with the large, complex project with foreseeable changes.

Few contractors keep adequate jobsite records that would allow one to evaluate these types of impact costs. They simply do not seem to realize that they have incurred

these costs until the project is near end and final construction cost accounting is underway.<sup>71</sup>

Given constantly improving computer programming, courts and boards will be looking to experts and contractors to utilize the same in establishing a causal connection with the changes and the impact costs claimed.

The cumulative impact claim should require the following proof:

1. Impact attributable to changes was unenforceable or was expressly excluded from change order settlements;
2. The changes were the sole cause of disruption for which the claim is made;
3. The “cumulative impact” was excessive and unreasonable in relation to what the contractor might have expected;
4. Impact costs cannot be segregated; and
5. Cumulative impact costs can be reasonably proven as to amount.<sup>72</sup>

#### 4.3 Lack of Causation

Since the costs associated with the cumulative impact claim could have resulted from the inefficiencies of the contractor, the owner will allege that the contractor has failed to prove causation.<sup>73</sup> As discussed above, some boards or courts may not require “pinpoint” proof that certain damages were caused by a specific change order.<sup>74</sup> However, some quantum of proof should be required to demonstrate that the multiplicity of changes caused a loss of productivity. For e.g., the contractor could prove that the change resulted in a change in working conditions and the changed working conditions led to the loss of productivity by the contractor. It has been commented that there must be a “real basis” for causation.<sup>75</sup>

The focus may be on the working conditions. A working condition may be common to or shared by both the disrupting changes and the disrupted work experiencing the loss of productivity. The causal connection can be shown by proof that “the disrupting changes and disrupted work took place in the same area or used the same resources, or that performance of the changes was a prerequisite to performance of the unchanged work.”<sup>76</sup>

In a one page trial court unpublished opinion in Nevada, one district court judge granted summary judgment on a cumulative impact claim stating:

Cumulative impact claims are presented when contractors cannot allocate damages to specific breaches and therefore cannot establish actual and proximate cause. Cumulative impact claims are too speculative to meet the requirements for possible recovery in Nevada and are not recognized under Nevada law.<sup>77</sup>

The case has little value from a precedent perspective and provides no analysis of case law in other jurisdictions which have historically permitted such a claim. It might just be that causation was required by the court to be established and lacking such reasonably certain proof, the court dismissed the claim.

#### 4.4 Existence of Noncompensable Disruptions and Inability to Apportion

When the contractor is itself responsible for some of the disruptions to the work conditions, the owner will not be accountable for such working condition disruptions if the contractor can not apportion between his caused disruptions and the owner's.<sup>78</sup> The owner will likely contend that the contractor was acting in a manner that impacted the job and there is no practical way to apportion between the two.

#### 4.5 Planned Productivity Was Unreasonable

The owner may contend that the contractor did not plan the job in the manner it should have. If the contractor did not adequately establish the requisite manpower or equipment necessary for the changes, it will not be able at a later time to contend this was unforeseeable. It is the corollary to foreseeability as a defense.

#### 4.6 Erroneous Assumption That Contractor Was Efficient

The owner may assert that is erroneous to assume that the contractor was efficient. This may be just another way of addressing the defense of unreasonable planning. However, it further connotes the in-the-field performance through supervision of crews and on-the-job performance.

### **5.0 *Improving the Contractor's Position: Practical Pointers***

There are several suggestions that may enhance the contractor's position when presenting or considering presenting a cumulative impact claim.

#### 5.1 Prove the Existence of a Cumulative Impact Caused by the Excessive and Frequent Changes

The principal and most obvious nexus to these claims is the fact that the number of claims is indeed excessive. Numerosity is the prime consideration. However, on top of this consideration and juxtapositioned with it is the concept of the timing or frequency of the changes. The closer in time the changes came, the opportunity for the contractor to thoroughly evaluate the change requests was reduced.

## 5.2 Prove that the Cumulative Impact of Excessive Changes Affected the Work

To defeat the owner's chief defense of lack of causation, the contractor will need to establish by competent proof and in most instances through competent experts, that the cumulative impact of the excessive number of changes affected the work conditions.

## 5.3 Prove that the Cumulative Impact of the Excessive Changes Increased the Cost of Performance

As an elemental proof concept, the contractor needs to further demonstrate that the impact alleged to have been sustained by the excessive number of changes in fact directly increased the cost of job performance.

## 5.4 Prove that the Impact Was Not Foreseeable when the Change Orders Were Priced

Foreseeability is one of the chief factors that we have seen courts and boards focus upon in reviewing the cumulative impact claim. Therefore, it is suggested that separate and apart from the other elements of this type of claim, that the contractor set forth in an acceptable format that the impact sought to be established, was not foreseeable at the time the change was requested or directed. This is a point-in-time proof issue and the better the quality of records that exist contemporaneous to the time consideration the better off the contractor's claim will be. However, proving a negative [unforeseeability] is difficult. The contractor should strive to identify what information was available when pricing the change and the fact that at the time of pricing there was no present indication of interruptions, re-sequencing or interference between trades due to the number of changes taking place.

## 5.5 Make Decision to Recover Synergistic Cumulative Impact Damages or Local Disruption Damages That Were Unforeseeable When Change Order Negotiated Due To Number and Overlapping Nature of Changes

When the contractor and counsel decide to pursue an impact claim in the presence of multiple changes on the job, they must recognize that the numerosity of changes alone does not dictate a compensable cumulative impact claim.<sup>79</sup> Courts and boards often look to the concurrent, overlapping nature of the changes,<sup>80</sup> as well as the frequency of the changes.<sup>81</sup>

When the contractor decides to assert a synergistic cumulative impact damages claim, the contractor needs to demonstrate that the release or settlement language contained in the change orders does not bar the claim.<sup>82</sup>

When the contractor decides to assert local-yet-unforeseeable impact associated with negotiated changes, the contractor needs to show that the changes were so numerous

and/or overlapping that the contractor had a loss of productivity as a result. The issue and focus is the ability to recognize or foresee this impact when negotiating the individual change order.<sup>83</sup>

## 5.6 Accounting for All Foreseeable Work and Working Conditions when Preparing Bids

At the bid stage, the contractor should analyze and account for all foreseeable work and working conditions. If the contractor's accounting system is unable to segregate change order costs and man-hours, the owner should be advised. If the system is able to account for change order costs and man-hours associated with the change orders, it should be used in this fashion.<sup>84</sup>

## 5.7 Establishing a Productivity Baseline

When the project first commences, the contractor needs to put together a "productivity baseline" that will document the planned productivities for the various trades as well as the types of work. If possible, this productivity baseline should establish one productivity rate, one quantity, and one crew for each activity.<sup>85</sup>

## 5.8 Contemporaneous Documentation of Changes in Working Conditions

If the working conditions change, the contractor is well advised to document not only the changes in the working conditions, but the work that was being performed under the conditions. The rates of productivity should be noted and if the productivity rate has varied this should be noted on a periodic basis.<sup>86</sup>

## 5.9 Pricing of Change Orders Using Current Project Records

When pricing the change orders, the contractor is advised to be sure to price each individual change order utilizing the current project records noting the current status of the work and account for previously implemented change orders. Doing the analysis at the time and not waiting, enables the contractor to more accurately price the changes. The contractor should also qualify proposals related to changes as being subject to further correction or augmentation should other changes be ordered on the project.<sup>87</sup>

## 5.10 Employment of Limitation Language in Change Orders

Although Keating and Burke contend that a cardinal change "trumps a release" it is recommended that the contractor employ language in the change orders preserving the right for further negotiation.<sup>88</sup> Finke suggests that if an appropriate contingency cannot be added, that the contractor should limit the scope of the change order settlement by defining the baseline against which the change order was priced as follows:

“The time and cost adjustments hereby accepted for Change Order [insert the identifying number of the change order being settled] cover the direct cost of the change order and the impact of the change order on the scope of work as defined by the original base scope of work and those change orders formally implemented on or before [insert the date], but excluding Change Orders [insert the identifying numbers of those change orders meant to be excluded from the scope of the current settlement].”<sup>89</sup>

## **6.0 Using Experts and Studies**

In order to establish the “cumulative” impact claim, the expert must be qualified and capable to prove the existence of the claim. The major issue today is how to increase the probability of the admissibility of expert opinion testimony on this type of claim. Construction cases are voluminous paper cases. Starting with the invitation to bid to the final payment, a large construction project generates thousands of documents, including the contracts, blueprints, shop drawings, soil reports, change orders, and all of the correspondence flowing between the various subcontractors, contractors, architects, engineers, and the owner. Several of these documents are highly technical in nature, requiring the use of an expert to explain both what they say as well as what they do not say. Given that many cumulative impact claims arise where contractors have not maintained adequate jobsite records to easily allow evaluation of impact costs, experts may attempt to extrapolate from studies on multiple change order projects to deduce an accurate pricing of the impact synergistically caused by the numerous changes. In *Kumho Tire v. Carmichael*,<sup>90</sup> the United States Supreme Court extended *Daubert v. Merrell Dow Pharmaceuticals, Inc.*<sup>91</sup> to testimony provided by **all experts** in federal court. In the construction field, and specifically in regard to the cumulative impact claim, experts now must meet the scrutiny of this United States Supreme Court case delineating how a district court should peruse the proffered testimony of an expert offered under FRE 702.

### **6.1 Court’s and Board's Reliance upon Experts in Cumulative Impact Cases**

Courts and boards tend to justifiably rely upon the expert in establishing various points of the cumulative impact claim. It is recommended that counsel for the contractor have the qualified construction expert focus on several different factors. Where multiple changes in working conditions in fact overlap an established loss of productivity, the expert should determine how much of the loss was caused by or attributable to the changes. When the contractor confronts both compensable and noncompensable changes in working conditions which overlap an established loss of productivity, then the expert should focus upon determining what portion of the loss was caused by or attributable to the compensable changes versus the noncompensable ones. Finally, where there are compensable and noncompensable change orders overlapping an established change in working conditions, the expert should focus upon determining what portion of the changed working conditions was caused by or attributable to the compensable change orders versus the noncompensable ones.<sup>92</sup>

## 6.2 Court's and Board's Reliance upon Studies

The courts being confronted with new federal evidentiary rules for admissibility of expert opinions in construction cases and boards desiring to follow the lead of federal courts on expert opinion admissibility standards, will be more closely scrutinizing the studies relied upon by experts and the courts.<sup>93</sup> Some of these studies that will be critically evaluated under gatekeeping functions of state and federal courts and administrative bodies will be as follows:

1. Thomas & Napolitan, "The Effects of Changes on Labor Productivity: Why and How Much."<sup>94</sup>
2. C. A. Leonard, "The Effect of Change Orders on Productivity."<sup>95</sup>
3. C. Ibbs & W. Allen, "Quantitative Impacts of Product Change."<sup>96</sup>
4. M. Finke, "A Better Way to Estimate and Mitigate Disruption."<sup>97</sup>
5. C. Ibbs, "Quantitative Impacts of Project Change: Size Issues."<sup>98</sup>
6. M. Finke, "Claims for Construction Productivity Losses."<sup>99</sup>
7. J. Diekmann & M. Nelson, "Construction Claims: Frequency and Severity."<sup>100</sup>
8. W. Hester, J. Kuprena & T. Chang, "Construction Changes and Change Orders: Their Magnitude and Impact."<sup>101</sup>
9. A. S. Hanna, J. S. Russell, T. W. Gotzion & E. V. Nordheim, "Impact of Change Orders on Labor Efficiency for Mechanical Construction."<sup>102</sup>
10. A. S. Hanna, J. S. Russell, E. V. Nordheim & M. J. Bruggink, "Impact of Change Orders on Labor Efficiency for Electrical Construction."<sup>103</sup>

In *Appeals of J. A. Jones Construction Company*,<sup>104</sup> J. A. Jones Construction Company ["JAJ"] presented a cumulative impact claim arising out of the Matewan Local Protection Project and a contract with the U. S. Army Engineer District. JAJ in alleging a loss of efficiency on contract work resulting from the number of changes calculated the loss through the aid of an expert on the theory presented in the "Leonard Study."<sup>105</sup> This study written by Mr. Charles Leonard for his Masters thesis at Concordia University in Canada supported the proposition that there is a productivity loss if change order labor hours are greater than ten percent of the base contract work hours and if this loss is compounded if other adverse impacts are also present on the job. The expert employed on behalf of JAJ was Mr. Paul L. DeMent. How the board perceived Mr. DeMent and his work product is worthy of examination.<sup>106</sup>

First, the board analyzed Mr. DeMent's education and professional standing. He only had a bachelor's degree in building construction, he had not received any formal training in the area of measuring labor productivity, he was not a member of any relevant professional associations, he had published no writings, he only had a business license and not an engineering or contractor's license, and he only learned how to perform productivity measurements from on-the-job experience.<sup>107</sup>

The board noted that Mr. DeMent's "measured mile" analysis was one-of-a-kind and noted that the opposing expert, who was much more experienced, had never heard of

this concept of analysis. The report of Mr. DeMent was not based upon fact and it did not contain any cause-and-effect analysis. There simply was no effort by Mr. DeMent to relate the impacts to anything that might have caused them. The board noted that this expert had a shallow understanding of the factors affecting crew performance and had made several erroneous assumptions in carrying out his work assignment. He did not consider the nature of any specific changes, or what locations/areas and work activities they directly affected. His analysis did not consider the timing of changes and whether JAJ had adequate notice to implement the changes and sequence the work in an orderly fashion.<sup>108</sup>

The board further scrutinized the Leonard Study and differentiated it from the present project. The board noted that the Leonard Study applied to projects experiencing greater than ten to fifteen percent change orders, as measured by labor hours, not labor costs or overall construction costs as was contended by Mr. DeMent. The Leonard Study was observed to study 57 relatively small building and facility projects, involving 94 contracts totaling \$220 million. The present project was perceived by the board to be of different scope and involving different trades. Importantly, the board stated that no court had adopted the Leonard Study approach in measuring productivity loss/inefficiency.<sup>109</sup>

The specific formula used for the "Measured Mile" analysis had not been tested or reviewed by Mr. DeMent's peers. In final analysis, the board concluded that this expert's opinion was highly questionable, unreliable and produced patently illogical results.<sup>110</sup>

## **7.0 Conclusion**

Cumulative impact is the disruption that happens between two or more change orders and basic work, but does not include local disruption directly attributable to a specific change order. A cumulative impact claim does not logically have to amount to a cardinal change in the contract. Rather, it is the aftermath of the inability of the contractor to accurately account for all impact costs resulting from the multiplicity of change orders. Courts will be inclined to focus on waiver and reservation language in the change orders to resolve these disputes.

Cumulative impact experts must be prepared to have the background and knowledge to support opinions that are testable and based upon methodology that is generally accepted in the construction industry.

<sup>1</sup> See Federal Government Standard Form 23A, 48 C.F.R. § 52.219 (1987) and AIA Doc. A201, General Conditions of the Contract for Construction, §7.1.1.

<sup>2</sup> M. Finke, "Claims for Construction Productivity Losses," 26 *Pub. Contr. L.J.* 311, 316-317 (No. 3, Spring 1997).

<sup>3</sup> *Haas & Haynie Corporation*, GSBCA Nos. 5530, 6224, 6638, 6919, 6920, 84-2 BCA ¶ 17,446 and *Centex Bateson Constr. Co.*, VABCA Nos. 4613, 5162, 5165, 99-1 BCA ¶ 30,153.

<sup>4</sup> 932 F. Supp. 906 (1993).

<sup>5</sup> See Cushman & Butler, *Construction Change Order Claims*, §7.1, p. 112.

<sup>6</sup> The E-Mail Construction Reporter, "Contractor Claims in 2001," February 20, 2001, p. 2.

<sup>7</sup> *Id.*

<sup>8</sup> *Id.* at 938.

<sup>9</sup> *Haas & Haynie Corporation*, GSBCA Nos. 5530, 6224, 6638, 6919, 6920, 84-2 BCA ¶ 17,446.

<sup>10</sup> *Id.*

<sup>11</sup> *Construction Claims Monthly*, "The Waiver or Reservation of Impact Costs," Vol. 23, No. 2 (February 2001).

<sup>12</sup> 2 Cl. Ct. 211, 30 Cont. Cas. Fed. (CCH) p. 70,991 (1983).

<sup>13</sup> *Id.* at 212, 213.

<sup>14</sup> *Pittman Construction Co.*, GSBCA Nos. 4897, 4923, 81-1 BCA ¶ 14,847.

<sup>15</sup> *Id.* at 213 –217.

<sup>16</sup> *Id.* at 213.

<sup>17</sup> *Id.*

<sup>18</sup> *Id.* at 214.

<sup>19</sup> *Id.* at 215.

<sup>20</sup> *Id.* at 216.

<sup>21</sup> *Id.*

<sup>22</sup> *Appeal of Ingalls Shipbuilding Div., Litton Systems, Inc.*, 1978 WL 2301 (A.S.B.C.A.), 78-1 BCA P 13,038, ASBCA No. 17,579 (A.S.B.C.A., Feb 17, 1978) (NO. NOBS4374, NOBS4510, NOBS4582, NOBS4616, NOBS4625, NOBS4924, 21(A)).

<sup>23</sup> *Id.* at 217.

<sup>24</sup> Keating and Burke, "Cumulative Impact Claims: Can They Still Succeed?" 20-*APR Construction Laws*. 30, April 2000; Finke, "Claims for Construction Productivity Losses," 26 *Pub. Cont. L.J.* 311 (1997).

<sup>25</sup> *Pittman Construction Co.*, GSBCA Nos. 4897, 4923, 81-1 BCA at 73,297.

<sup>26</sup> *Haas & Haynie Corporation*, GSBCA Nos. 5530, 6224, 6638, 6919, 6920, 84-2 BCA ¶ 17,446.

<sup>27</sup> *Space Age Engineering*, ASBCA Nos. 25761, 25982, 26020, 26381, 28346, 86-1 BCA ¶ 18,611 at 93,477.

<sup>28</sup> *Triple "A" South*, ASBCA No. 46886, 94-3 BCA ¶ 27,194 at 135,523.

<sup>29</sup> *Southwest Marine, Inc.*, 94-3 BCA ¶ 27,102.

<sup>30</sup> *Hensel Phelps*, ASBCA No. 49270, 99-2 BCA ¶ 30,531 at 150,795 [citing *Santa Fe Eng'g, Inc.*, ASBCA Nos. 24578, 25838, 2838, 28687, 94-2 BCA ¶ 26,872].

<sup>31</sup> *Bechtel Nat'l, Inc.*, NASA BCA No. 1186-7, 90-1 BCA ¶ 22,549 at 113,177.

<sup>32</sup> *Centex Bateson Constr. Co.*, VABCA Nos. 4613, 5162, 5165, 99-1 BCA ¶ 30,153.

<sup>33</sup> In a recent law review article, the cardinal change basis for cumulative impacts was still being espoused. *Construction in Puerto Rico: Navigating the Legal Quagmire*, Revista Juridica Universidad de Puerto Rico, 71 Rev. Jur. U.P.R. 29 (2002). The article cited *Godwin Equip, Inc.*, ASBCA 51939 (2000) [The Armed Services Board of Contract Appeals relied on cases allowing Contractors to recover for breach of contract when the government makes a cardinal change to the contract's scope of work. In *Godwin*, the Contractor alleged that the government had significantly delayed the project, i.e., was responsible for a "cardinal delay," and because of the material breach, the Contractor should not be held to the contract's limited remedy for delay.]

<sup>34</sup> *Construction Claims Monthly*, "The Waiver or Reservation of Impact Costs," Vol. 23, No. 2 (February 2001) at p. 3; see also *Northrup Grumman Corporation v. United States*, 47 Fed. Cl. 20, 63 – 70 (2000)[Total cost method of calculating damages is based upon the difference between a contractor's actual incurred costs and its proposed costs and is appropriate when (a) the nature of the losses makes it impossible or highly impracticable to determine the actual losses directly with a reasonable degree of accuracy, (b) the contractor's bid was reasonable, (c) the contractor's actual costs were reasonable, and (d) the contractor was not responsible for the added costs. "The modified total cost recovery is appropriate when a court can reasonably determine the difference between the cost of performance and the bid, subtracting from that subtotal an amount that reflects contractor-caused costs."].

<sup>35</sup> Keating and Burke, at 31.

<sup>36</sup> Finke at 317.

<sup>37</sup> See contra Ralph C. Nash, 6 *Nash & Cibinic Rep.* ¶ 27 (May 1992)[Professor Ralph Nash assessment is that "there is no independent claim for cumulative impact"].

<sup>38</sup> Keating and Burke at p. 31.

<sup>39</sup> 1998 WL 853085 (V.A.B.C.A.), 99-1 BCA P 30,153, VABCA No. 4613, VABCA No. 5162, VABCA No. 5165 (December 3, 1998).

<sup>40</sup> *Appeals of J. A. Jones Construction Company*, ENG BCA No. 6348, 2000 WL 1016846 (Eng. B.C.A.)(July 7, 2000).

<sup>41</sup> *Id.* citing e.g., *Saudi Tarmac Co.*, ENG BCA No. 4841, 89-3 BCA ¶ 22,132; *McMillin Bros. Constructors, Inc.*, EBCA No. 328-10-84, 91-1 BCA ¶23,351, aff'd 949 F.2d 403 (Fed. Cir. 1991); *Bechtel Nat'l, Inc.*, NASA BCA No. 1186-7, 90-1 BCA ¶ 22,549.

<sup>42</sup> *Id.*

<sup>43</sup> GSBCA Nos. 7107, 6198, 88-2 BCA ¶ 20,806, at 105,121 (1988).

<sup>44</sup> *Id.*

<sup>45</sup> 99-1 BCA ¶ 30,153 (VABCA).

<sup>46</sup> *Id.* at 149, 258. *Id.* at 149, 258. *Id.* at 149, 258.

<sup>47</sup> *Id.* at 149, 259.

<sup>48</sup> *Id.*

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<sup>49</sup> Finke at 333. Finke at 333. Finke at 333.

<sup>50</sup> *Southwest Marine, Inc.*, ASBCA No. 36854, 95-1 BCA ¶ 27,601, at 137, 518. See also *Cocoa Elec. Co., Inc.*, ASBCA No. 33921, 91-1 BCA ¶ 23,442 [utilizing “total time” claim analysis].

<sup>51</sup> *Southwest Marine, Inc.*, ASBCA No. 36854, 95-1 BCA ¶ 27,601, at 137,520.

<sup>52</sup> 2 Cl. Ct. 211 (1983).

<sup>53</sup> *Norman Peterson Co. v. Container Corp.*, 218 Cal. Rptr. 592 (1985).

<sup>54</sup> *Id.* at 597.

<sup>55</sup> *Id.* at 601.

<sup>56</sup> Keating and Burke at 35.

<sup>57</sup> Finke at 324.

<sup>58</sup> *Construction Claims Monthly*, “The Waiver or Reservation of Impact Costs,” Vol. 23, No. 2 (February 2001) at p. 7.

<sup>59</sup> GSBCA Nos. 7107, 6198, 88-2 BCA ¶ 20,806, at 105,121 (1988).

<sup>60</sup> See endnote 36; *Saudi Tarmac Co., Ltd.*, ENG BCA No. 4841 (1989).

<sup>61</sup> *Chantilly Construction Corp.*, ASBCA No. 24138, 81-1 BCA p 14,863, at 73,396.

<sup>62</sup> See endnote 36; *Saudi Tarmac Co., Ltd.*, ENG BCA No. 4841 (1989).

<sup>63</sup> *Appeals of David J. Tierney, Inc.*, GSBCA Nos. 7107, 6198, 88-2 BCA ¶ 20,806, at 105,121 (1988).

<sup>64</sup> *Massman Contracting Co. v. United States*, 23 Cl. Ct. 24 (1991); *Central Mechanical Construction*, ASBCA No. 29434 (1986); *Emulsified Asphalt, Inc. of Wyoming v. Transportation Commission of Wyoming*, 970 P.2d 858 (WY 1998).

<sup>65</sup> 570 F.3d 1337 (Fed. Cir. 2009)

<sup>66</sup> *Id.* at 639.

<sup>67</sup> *Id.* at 630.

<sup>68</sup> 62 Fed.Cl. 84 (2004)

<sup>69</sup> *Id.* at 92, 92 (citation omitted)

<sup>70</sup> *Id.* at 93 (citations omitted)

<sup>71</sup> C. Ibbs & W. Allen, “Quantitative Impacts of Product Change,” 4, *Construction Industry Institute Source Document 108* at 4 (May 1995).

<sup>72</sup> *Bruner # O’Conner Construction Law*, § 15.119 (footnotes omitted).

<sup>73</sup> *AMEC Civil, LLC v. DMJM Harris, Inc.*, 2009 WL 1883985 (D.N.J.) [Motion for summary judgment granted to prevent contractor from using cumulative impact theory to prove damages. Contractor contended DMJM’s negligence created ripple effect that impacted contractor’s work. Contractor alternatively would be required to demonstrate that its cost codes accurately represented costs attributable solely to DMJM’s actions.]

<sup>74</sup> *Appeals of David J. Tierney, Inc.*, GSBCA Nos. 7107, 6198, 88-2 BCA ¶ 20,806, at 105,121 (1988).

<sup>75</sup> Finke at 328, 329.

<sup>76</sup> Finke at 328, 329.

<sup>77</sup> *In re Venetian Lien Litigation*, 2004 WL 3265025 (Nev. Dist. Court)

<sup>78</sup> See endnote 45.

<sup>79</sup> *Appeal of Freeman-Darling, Inc.*, GSBCA No. 7112 (1989).

<sup>80</sup> *Space Age Engineering*, ASBCA Nos. 25761, 25982, 26020, 26381, 28346, 86-1 BCA ¶ 18,611 at 93,477.

<sup>81</sup> *Southwest Marine, Inc.*, 94-3 BCA ¶ 27,102.

<sup>82</sup> Finke at 324.

<sup>83</sup> *Id.*

<sup>84</sup> *Id.* at 336.

<sup>85</sup> *Id.*

<sup>86</sup> *Id.*

<sup>87</sup> *Id.* at 336, 337.

<sup>88</sup> Keating and Burke at 32.

<sup>89</sup> Finke at 337.

<sup>90</sup> 526 U.S. 137 (1999)

<sup>91</sup> 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993).

<sup>92</sup> Finke at 336.

<sup>93</sup> *Appeals of J. A. Jones Construction Company*, ENG BCA No. 6348, 2000 WL 1016846 (Eng. B.C.A.) (July 7, 2000).

<sup>94</sup> *Construction Industry Institute, Source Document 99* (Aug. 1994).

<sup>95</sup> 5 *Revay Report* 1-3 (No. 2, 1987).

<sup>96</sup> 4, *Construction Industry Institute Source Document 108* (May 1995).

<sup>97</sup> 124 *J. Constr. Engineering & Mgmt.* 490 (No. 6, Nov./Dec. 1998).

<sup>98</sup> 123 *J. Constr. Engineering & Mgmt.*, 308 (No. 3, Sept. 1997).

<sup>99</sup> 26 *Pub. Cont. L.J.* 311 (No. 3 Spring 1997).

<sup>100</sup> *J. Constr. Engineering & Mgmt.*, ASCE 111 (1985).

<sup>101</sup> *Construction Industry Institute, Source Document 66* (1991).

<sup>102</sup> *Journal of Construction Engineering and Management*, May/June 1999.

<sup>103</sup> *Journal of Construction Engineering and Management*, July/August 1999.

<sup>104</sup> ENG BCA No. 6348, 2000 WL 1016846 (Eng. B.C.A.) (July 7, 2000).

<sup>105</sup> *Construction Industry Institute, Source Document 99* (Aug. 1994).

<sup>106</sup> ENG BCA No. 6348, 2000 WL 1016846 (Eng. B.C.A.) (July 7, 2000).

<sup>107</sup> *Id.*

<sup>108</sup> *Id.*

<sup>109</sup> *Id.*

<sup>110</sup> *Id.*