BY NICK HARRIS

How Contractors Can Avoid Claim Pricing Pitfalls

From equipment and overhead rates to faulty math and logic, inaccurate or unreasonable claim pricing can delay reimbursement and cause costly disputes. However, with the right strategies, contractors can implement effective pricing methodologies and avoid common mistakes.

This article will explore how to evade common claim pricing pitfalls and save time, money, and energy along the way.

Understand Liability, Damages & Causation

Construction claims involve two important components, liability and damages. Without proper proof of damages, proving liability is of little value.[1] Conversely, a valid claim for damages requires a plaintiff to establish a "causal link" between liability (e.g., the owner's actions) and damages (e.g., added costs to the contractor).[2]

Courts often decline to award damages when causation is inadequately demonstrated.[3] Thus, it is important to include costs that can be linked to the actions giving rise to the claim.

Choose the Right Pricing Methodology

Contractors submit claims for many reasons including scope changes, design changes, acceleration, delay, and disruption. Depending on the nature of the claim and the documents and information available, different pricing methodologies may apply.

There are four common pricing methodologies: 1) the total cost method, 2) the modified total cost method, 3) productivity analysis, and 4) specific identification of cost.

As shown in Exhibit 1, the order of these pricing methodologies generally reflects the amount of time and effort required to prepare and price a claim.

Unfortunately for contractors, the same order generally applies when considering the degree to which the pricing methodology links liability and damages. While exceptions and limitations can apply, contractors should carefully consider this trade-off.

Total Cost Method

As a "top-down" approach, the total cost method compares the contractor's bid to its total costs to complete the project and employs the basic formula:

Damages = Actual Cost - Bid Price [4]

This approach can significantly reduce the amount of time and analysis required to calculate a claim. However, courts generally require that contractors establish the following four criteria to validate a total cost claim:

1) The nature of the costs and impacts were such that the claim could not be priced under any other method;
2) The contractor's bid was reasonable and free of material errors;
3) The contractor's actual costs were reasonable and accurately recorded; and
4) The cost overruns were not the responsibility of the contractor.[5]

As these criteria can be difficult to prove and are often disputed, contractors should consider the following questions before selecting this methodology:

How Reasonable Is the Bid?

Examples of mispricing or errors anywhere in the bid can discredit the claim. Therefore, contractors should take a

EXHIBIT 1: Claim Pricing Methodology Trade-Off

Method	Time and Effort (In General)	Precision (In General)
Total Cost Claim	Low	Low
Modified Total Cost Claim	↓	↓
Productivity Claims	↓	↓
Specific Identification	High	High

EXHIBIT 2: **Claims Greater than Total Cost**

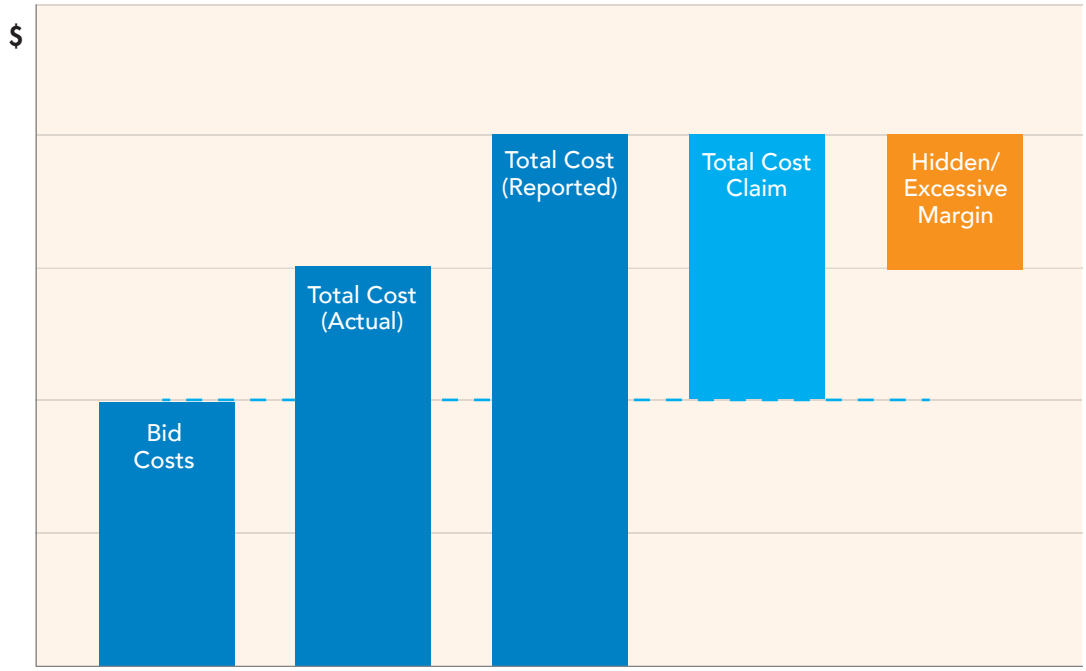


EXHIBIT 3: **Failure to Fully Remove Contractor-Caused Impacts in a Modified Total Cost Claim**

Job Cost Report – Tiling Subcontractor

Date	Cost Code	Type	Amount
9/10/2017	Tile Installation	L	$ 2,498.17
9/10/2017	Tile Installation	L	$ 2,498.17
9/10/2017	Tile Installation	L	$ 3,122.85
9/10/2017	Tile Installation	L	$ 3,122.85
9/24/2017	Tile Installation	L	$ 2,498.17
9/24/2017	Tile Installation	L	$ 2,498.17
9/24/2017	Tile Installation	L	$ 3,122.85
9/24/2017	Tile Installation	L	$ 3,122.85
10/8/2017	Tile Installation	L	$ 2,498.17
10/8/2017	Tile Installation	L	$ 2,498.17

Non-Reimbursable Codes Unused

Daily Report

Date: 9/18/17

Remarks:
Demo and dispose of tile.
Reinstall tile.

Daily Report

Date: 9/20/17

Remarks:
Demo and rework.
Remove tile, reinstall wall tile, and replacement tile.

close look at the reasonability of their bids when considering a total cost claim.

How Defensible Are Your Costs?

In a total cost claim, any cost or transaction could be subject to scrutiny. Check the reasonableness of your claimed costs by considering any differences between alleged costs incurred and actual cash disbursements. If the total project costs asserted exceed the sum of cash payments (plus credit purchases), then your claim may be overstated. In other words, you may be claiming profit margins much greater than contemplated in the contract documents, as depicted in Exhibit 2.

Modified Total Cost Method

The modified total cost method avoids some of the shortcomings of a total cost claim by adjusting for mispricing in the bid and impacts for which the contractor is responsible (e.g., contractor-caused delays).[6] Here is the basic formula for a modified total cost claim:

Damages = Actual Cost - Bid Price - Underbid Amount - Contractor-Caused Impacts[7]

While this approach can lower some of the hurdles to validating a total cost claim, challenges still exist. For example, if a contractor admits to installing defective work, it may modify its total cost claim to remove related rework costs. However, even a minor miscoding or failure to fully segregate rework costs could discredit the claim.

For example, suppose a tile contractor uses the modified total cost method to price the impacts of owner design changes on a high-rise hotel project. The claim supposedly removed costs related to deficient tile installation in the bathroom areas where the originally installed tile was absorbing water and had to be removed and replaced.

However, a comparison of the job cost report to the daily reports shows that the contractor performed demolition and reinstallation of tile at a time when the contractor was not segregating any costs into non-reimbursable cost codes, as shown in Exhibit 3. In other words, there was evidence that the contractor failed to fully remove the cost impacts for which it was responsible.

Like the total cost method, the modified total cost method is a top-down approach. For that reason, the causal link between liability and damages is often more of an inference than a direct link. This appears to be one reason why courts prefer a more precise methodology to pricing claims, when practicable.[8]

Productivity Analysis

Productivity analysis seeks to quantify the impact of disruptions to a contractor's productivity. The measured-mile approach is the most commonly used type of productivity analysis.[9] Such productivity analyses are more commonly accepted by courts than the total cost or modified total cost methods. That is because a causal link between the impact and damages can often be established.[10]

At the same time, a measured-mile approach is typically much more complex and labor intensive than a total cost or modified total cost approach.[11]

The measured-mile approach compares the contractor's activities during the disrupted period of performance with the contractor's identical or substantially similar activities during a period of unaffected performance.[12]

The first step is to establish a baseline level of productivity for a period of unaffected performance. This baseline describes the level of productivity that the contractor would have experienced without the disruptive event.[13] When the project in question did not have a period of unaffected performance (i.e., the entire project or contractor's scope of work was impacted), other sources for baseline productivity may apply.

Once an appropriate baseline is established, actual productivity is compared. The difference between actual productivity and baseline productivity is the calculated loss, usually expressed in terms of labor hours. Here is the basic formula:

Added Labor Due to Impacts = Actual Productivity - Baseline

While productivity analysis can provide a more precise approach, there are common pitfalls to avoid. Some examples are discussed in this article.

Specific Identification of Cost

Specific identification of cost, or a discrete cost approach, attempts to directly link claim issues with increases in costs.[14] For example, for activity-related costs, the discrete cost approach links a causal event or action to an increase in activity-related costs.[15] This is generally considered the most precise and effective methodology. However, the availability of documents and information can often limit or preclude this approach.

Beware of the Double-Count

Claim consultants and damages experts are always on the lookout for double-counts. Mathematical errors are the most

common form. For example, claim pricing models are often built in Excel spreadsheets, which can be prone to formula errors. Other sources of double-counts relate to failed logic and misapplied methodologies. The following are a few common examples.

Claiming Previously Awarded Work as Added Work

Exhibit 4 shows an example where the contractor is requesting a change order (CO 1) for added electrical work priced at $1.2 million. However, the owner determined that only $500,000 of the work was outside of the original contract scope. The remaining costs related to work that was either included in the original scope or a proper use of allowances or contingency.

Claiming Previously Awarded Work in a Productivity Analysis

Exhibit 5 demonstrates a common double-count related to productivity claims. In this example, CO 1 was awarded and included 3,000 additional labor hours. At the end of the project, the contractor performed a measured-mile analysis and requested 5,000 additional labor hours related to productivity impacts. However, the owner identified that the contractor's measured-mile analysis included labor hours already awarded in Change Order 1. In other words, only 2,000 additional labor hours were incurred and caused by the productivity impacts.

Claiming Small Tools as Cost-Plus Work

Small tools are often the subject of double-counts. Many contracts provide for reimbursement of small tools in the markup for overhead and fee. In those cases, the contract usually defines small tools based on a threshold replacement value (see Exhibit 6).

Even with this type of contract provision in place, contractors often include small tools as a separate reimbursable cost in their claims, as shown in Exhibit 6. The inclusion of small tools in the cost basis of the claim, and in the reimbursable overhead rates, double-counts the small tools costs.

Be Consistent with the Bid & Contract

Typically, claim pricing should be consistent with the bid and contract. However, contractors often redefine equipment rates when pricing claims. Two examples help demonstrate this point.

Redefining Contractor-Owned Equipment Rates

While lump-sum pricing is common in construction contracts, claims for changed or added work are usually priced in terms of cost or unit rates. This can lead to issues including double-counts when contractors price claims for work related to lump-sum components of the original contract. Exhibit 7 shows an example based on a railway installation project.

In this case, the original bid and contract included lump-sum pricing for certain aspects of the work, and cost plus a fee for others. Specifically, Railway Services comprised a $9 million lump-sum component of the $23 million overall contract. It is important to note that the original bid did not separately price any labor or equipment-related costs like fuel, oil, delivery, and maintenance. That is because those costs were included in the lump-sum price for Railway Services.

For changed or added work, the contract specified that Railway Services should be priced using unit rates. The unit rates were intended to serve as a proxy for the lump sum component of the original contract.

As such, the unit rates for Railways Services were intended to include the same costs as the original lump-sum for

EXHIBIT 4: **Claiming Scope Work as Change Work**

	In Scope	Out of Scope	Allowance	Contingency	Total
Original Contract	$ 8,000,000		$ 1,000,000	$ 1,000,000	$ 10,000,000
CO 1 - Request	$ 300,000	$ 500,000	$ 300,000	$ 100,000	$ 1,200,000
CO 1 - Adjusted		**$ 500,000**			**$ 500,000**

EXHIBIT 5: **Including Awarded Changes in a Productivity Analysis**

	Orig. Contract/Bid	CO 1	Total Awarded	Actual	Difference	Claimed
Labor Hours	50,000	3,000	53,000	55,000	**2,000**	**5,000**

Railway Services (i.e., equipment, labor, fuel, oil, delivery, and maintenance).

However, as shown in Exhibit 7, in pricing its claim for added Railway Services, the contractor used the agreed-upon unit rates but separately included equipment-related costs like Fuel & Oil, Transportation, and Maintenance on a cost-plus-a-fee basis. The inconsistency between the claim and the bid effectively double-counted these equipment-related costs because they were intended to be included in the unit rates for Railway Services.

As Exhibit 7 shows, the result is a $1 million overstatement of the claim from $5 million to $6 million.

Often, contractor-owned equipment rates do not only include fuel and other costs to operate the equipment, but also complementary equipment or components within one stated rate, as demonstrated in Exhibit 8.

In this case, the bid and contract defined a Rail Cart as including complementary equipment, namely the Panel Hoist and Rail Cart Trailer. Those three components were included in the overall rate of $1,500 per day for the Rail Cart in the contract.

However, in pricing a claim for owner-caused delays, the contractor priced each rail cart component separately for a total cost of $1,850 per day. As a result, the claim was overstated by $350 for each day of alleged delay, plus the associated markup.

Avoid a Misleading Measured Mile

As previously stated, a measured-mile analysis can be a preferred methodology. It can also be incredibly detailed, complex, and time-consuming. Avoid wasting time and energy on an ineffective analysis by avoiding some common mistakes.

Inappropriate or Inapplicable Baseline

A measured-mile analysis compares the level of productivity that the contractor actually obtained on the impacted portion of the project to a baseline level of productivity (i.e., productivity that the contractor should have obtained). The baseline must be appropriate and applicable. Exhibit 9 shows an example where that was not the case.

In this example, the GC self-performed concrete placement in constructing a residential high-rise. The GC claimed productivity impacts related to the engineer's alleged failure to provide sufficient design drawings and respond to the contractor's requests for information (RFIs) in a timely manner.

The alleged impacts were isolated to the higher floors of the building where the amenities and mechanicals were found, and where the unit floor plans were larger and unique compared to the lower floors.

As shown in Exhibit 9, the contractor measured its productivity on the lower floors of the building, in terms of cubic yards of concrete poured per labor hour, to establish the baseline for its measured mile analysis.

EXHIBIT 6: **Smalls Tools in Overhead as Defined by the Contract**

CONTRACT DEFINITIONS
Small Tools shall include any tool not listed and with a replacement value of less than $1,000.

CONTRACT CHANGES
Overhead and contractor's fee percentages shall be considered to include...use of small tools.

Claim

Labor	$	50,000
Materials		150,000
Equipment		20,000
Subtotal	**$**	**220,000**
Overhead (15%)		33,000
Fee (10%)		22,000
Total	**$**	**275,000**

Job Cost Report

Description	Amount
Hammers	$120
Saw Blades	$310

Small Tools @ Actual Amount

Small Tools @ Estimated Amount

EXHIBIT 7: **Requesting Unit Rate Components as Cost-Plus Items**

	Bid/Contract		Claim	
	$	Cost Basis	$	Cost Basis
Mobilization	$ 250,000	Lump Sum	$ -	
Railway Services	9,000,000	Lump Sum	5,000,000	Unit Rate
Materials:				
Rails	10,000,000	Cost Plus		
Guards	2,000,000	Cost Plus		
Fasteners	1,000,000	Cost Plus		
Fuel & Oil			400,000	Cost Plus
Transportation			300,000	Cost Plus
Maintenance			300,000	Cost Plus
Subcontract/ Vendors:				
Site Mats	250,000	Cost Plus		
Fencing	500,000	Cost Plus		
Total	$ 23,000,000		$ 6,000,000	

EXHIBIT 8: **Equipment Rates Inconsistent with the Bid or Contract**

DEFINITION
Rail Cart includes one panel hoist and one trailer.

Bid/Contract	
Rail Cart	$ 1,500/day
Panel Hoist	included
Rail Cart Trailer	included
	$ 1,500/day

Claim	
Rail Cart	$ 1,500/day
Panel Hoist	200/day
Rail Cart Trailer	150/day
	$ 1,850/day

However, that baseline was inapplicable to the higher floors, where the productivity impacts were alleged to have occurred. That is because the floorplans on the lower floors were all typical, or similar from floor to floor. As such, the GC could have expected a higher rate of productivity on the lower floors compared to the higher floors, even without any alleged disruption caused by late or insufficient design.

Further, the owner and its consultants were able to show that the GC did not begin submitting RFIs until it was actively placing concrete on the higher floors. Additionally, when the RFIs were eventually submitted, the engineer's responses were relatively timely given the facts and circumstances. As such, the owner disputed the GC's claim on the basis of liability and an inappropriate pricing methodology.

In cases where the entire project is disrupted, or no applicable baseline period exists within the subject project, contractors may use alternative sources for a baseline level of productivity. One such alternative is the bid. However, the bid does not necessarily reflect an achievable or reasonable level of productivity. Exhibit 10 compares differing levels of productivity between the bid, actual performance, and a more reasonable bid. In this case, actual productivity was reflective of what the bid should have been, not the other way around.

Incomplete or Biased Time Period

Another common pitfall in pricing productivity claims is an incomplete or biased time period. Exhibit 11 shows an example where the contractor's claim happened to cover a period of particularly low productivity. Simply expanding the analysis to a broader time period showed that the contractor recovered from any productivity impacts later in the project when productivity significantly increased.

Understand Delay Claims

As in other types of claims, causation is a key consideration in delay claims. For example, even if a subcontractor finishes late, or owner-purchased fixtures are delayed, the critical path and overall completion of the project may be unaffected. Even if overall completion is affected, liability for delay could be split amongst several parties (e.g., the owner, GC, subcontractors, vendors, etc.). While the assignment of liability for delay is a topic of its own, the assignment of costs to those delays has pitfall potential.

Activity-Related Costs in Delay Claims

In pricing delay claims, it is important to understand the difference between time-related and activity-related costs. Time-related costs increase as duration increases, independent of progress toward completion.

For example, daily equipment rental rates are incurred each day the equipment is deployed on the project, whether or not it is used. Activity-related costs generally increase as progress toward completion increases, independent of time. Materials are an example.

The concept is simple, but in pricing claims, the difference between time-related and activity-related costs can be more complex. Still, when contractors allege a loss of time, the associated claims should be priced in terms of time-related costs. Contractors do not always get that right. Exhibit 12 highlights an example.

In this example, the contractor claimed costs for delays allegedly caused by delayed fabrication of owner-procured mechanical fixtures. The contractor's claim included owned and rented equipment costs. Upon inspection of those equipment costs, the owner and its consultants identified instances of extended equipment use (i.e., driven by time and caused by delay).

However, the owner and consultants also identified that many of the claimed equipment costs related to increased or inefficient use during a given period of construction, and not simply delays as alleged by the contractor.

One particularly clear example was the use of light towers. Light towers are gas-powered flood lights that provide light during nighttime hours, allowing work to continue after nightfall. In this case, as shown in Exhibit 12, the bid contemplated using 20 light towers per month at the peak of construction activity. In reality, project records showed almost 100 light towers in use per month during the comparable phase of the project. This pointed to an increase in activity, not time.

Since the contractor blamed the owner for extending the project duration (i.e., delay), not compressing it (i.e., acceleration), the causal link between liability and damages was unclear.

Furthermore, in this particular case, there was evidence that the claimed equipment costs were driven in part by the contractor's inefficiencies and unwillingness to return equipment to the contractor's owned equipment yard in another state.

Final Thoughts

When pricing construction claims, consult with experienced and qualified personnel, including legal counsel, as necessary. Every case is different.

As such, there is no claim pricing prescription that can be applied universally, and there is no way to anticipate every claim pricing pitfall. When pricing construction claims, contractors and practitioners should seek to understand the facts and circumstances unique to each individual case – only then can sound reasoning be applied.

Remember that in pricing construction claims it is important to establish a causal link between liability and damages, and include costs that can be linked to the actions giving rise to the claim.

EXHIBIT 12: **Activity-Related Costs in Delay Claims**

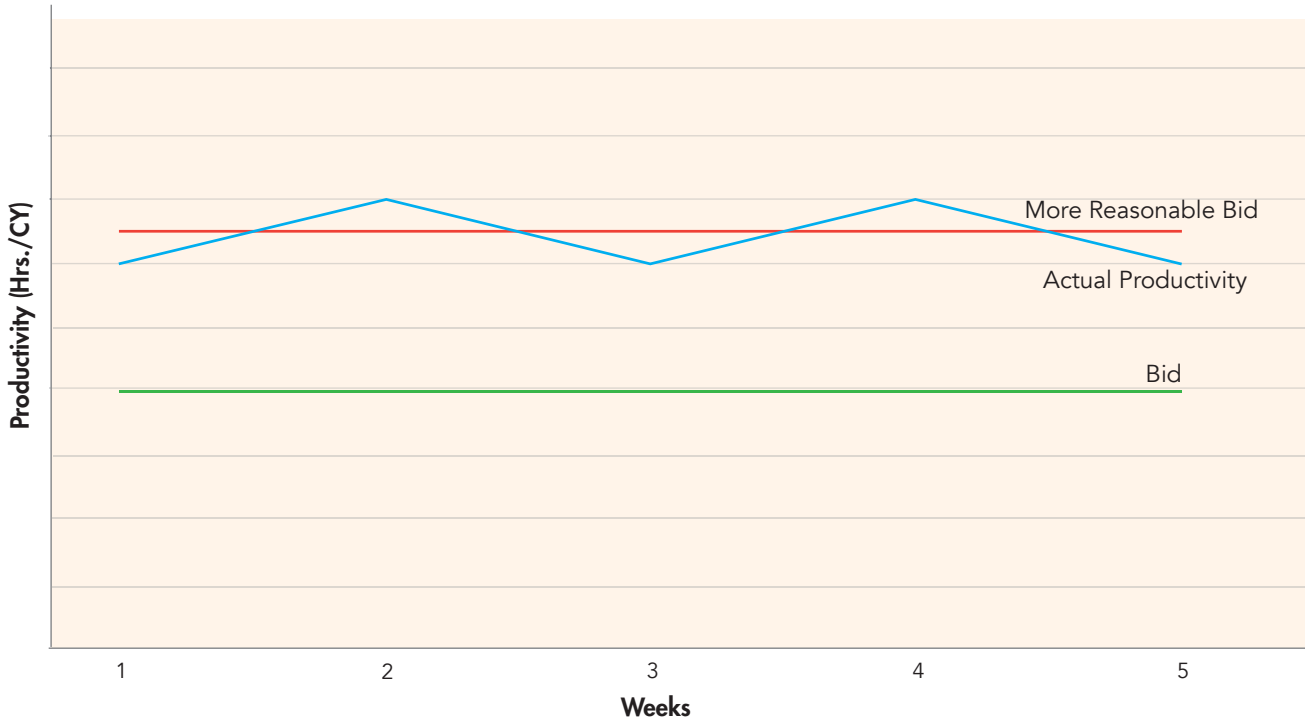
	Units in Use Per Month (Peak)			
Equipment Type	Bid	Claim	Difference	Percent Increase
Light Tower	20	100	80	400%

EXHIBIT 9: **Inappropriate or Inapplicable Baseline**

Week	Floor Plan	Baseline Productivity (Hrs/CY)		Actual Productivity (Hrs/CY)	Lost Productivity	# of RFIs	Average Days to RFI Response
1	Typical	2.0		2.0	-	-	-
2	Typical	1.5	Average = 2.0	1.5	-	-	-
3	Typical	2.5		2.5	-	-	-
4	Typical	2.0		2.0	-	-	-
5	Typical	2.0		3.0	1.0	-	-
6	Typical	2.0		3.2	1.2	-	-
7	Mechanical	2.0		3.3	1.3	2	4
8	Larger Units	2.0		4.0	2.0	-	-
9	Larger Units	2.0		3.1	1.1	10	7
10	Amenities/Pool	2.0		2.9	0.9	12	5

Measured Mile Baseline

EXHIBIT 10: **Unreasonable Bid as a Measured-Mile Baseline**



And, perhaps most importantly, contractors can avoid many claim pricing pitfalls by applying sound pricing methodologies and review procedures before submitting claims. ■

Endnotes

1. *Proving and Pricing Construction Claims*, Third Edition; Robert F. Cushman, John D. Carter, Douglas Coppi; Wolter Kluwer, Section 1.01.
2. *Litigation Services Handbook, The Role of the Financial Expert*, Sixth Edition; Roman T. Weil, Daniel Lentz, Elizabeth Evans, p. 4-25.
3. Ibid.
4. Id., p. 33-13.
5. *Proving and Pricing Construction Claims*, Third Edition; Robert F. Cushman, John D. Carter, Douglas Coppi; Wolters Kluwer, Section 1.05.
6. *Litigation Services Handbook, The Role of the Financial Expert*, Sixth Edition; Roman T. Weil, Daniel Lentz, Elizabeth Evans, p. 33-14.
7. Ibid.
8. Ibid.
9. Ibid.
10. *Proving and Pricing Construction Claims*, Third Edition; Robert F. Cushman, John D. Carter, Douglas Coppi; Wolters Kluwer, Section 3.07[C].
11. *Litigation Services Handbook, The Role of the Financial Expert*, Sixth Edition; Roman T. Weil, Daniel Lentz, Elizabeth Evans, p. 33-14.
12. *Proving and Pricing Construction Claims*, Third Edition; Robert F. Cushman, John D. Carter, Douglas Coppi; Wolters Kluwer, Section 3.07[C].
13. *Litigation Services Handbook, The Role of the Financial Expert*, Sixth Edition; Roman T. Weil, Daniel Lentz, Elizabeth Evans, p. 33-14.
14. *Proving and Pricing Construction Claims*, Third Edition; Robert F. Cushman, John D. Carter, Douglas Coppi; Wolters Kluwer, Section 1.05.
15. Ibid.

NICK HARRIS is Senior Manager of Forensic and Litigation Services at GreerWalker LLP in Charlotte, NC. Nick specializes in forensic accounting and damages valuation including pricing construction claims. He has assisted owners, GCs, subcontractors, design professionals, and insurance companies in valuing and critiquing claims related to lost profits, cost overruns, defective work, acceleration, delay, and disruption. Nick has testified as an expert witness in state and federal court, and frequently lectures on subjects including damages valuation and the use of accounting in legal disputes.

Phone: 704-816-7039
E-Mail: nick.harris@greerwalker.com
Website: www.greerwalker.com

EXHIBIT 11: **Incomplete or Biased Time Period in a Productivity Analysis**