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DOCUMENTING AND PRESENTING COSTS IN UNDERGROUND CONSTRUCTION CLAIMS

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ABSTRACT: By its nature underground construction has to address many unknowns and variables. Many contracts anticipate potential claims for differing site conditions and other variables. As an underground contractor, the question is not will I ever have to file a claim but, will I be prepared when a claim has to be filed. Therefore it is imperative to understand how to prepare for, document and present an underground construction claim.

Each claim is unique, yet the need to capture labor, equipment, material and subcontractor costs is always essential. Claims also need to recover field overhead, home office overhead, profit, and project delay costs. Finally, claims need to identify scheduling, escalation, acceleration and inefficiency costs. A claim can also cause contractors to lose focus on business fundamentals and therefore create losses on other projects and in other areas of the business. These losses must be avoided.

Underground construction claims are unique yet have some similarities to all construction claims. Some of the critical stages involved in the underground construction claims process are: 1st Contract Terms. 2nd Pre Claim Preparation and Training, 3rd Notification, 4th Use of Experts, 5th Preparation, Presentation & Mitigation of Damages and 6th Negotiation/Dispute Resolution. Each stage includes items critical to the successful resolution of claims.

Underground construction claims take time, effort and persistence. Our purpose is to examine what is needed to properly document, present and negotiate “win-win” underground construction claims.

INTRODUCTION

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create losses on other projects and in other areas of the business. These unanticipated losses must be avoided.

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CONTRACT TERMS

In underground construction it is critical to understand the contract and be familiar with the methods of recovery specified in the contract. In reviewing and signing contracts it is good to have legal counsel review them; a problem solved before construction is much cheaper than after there is a problem. When reviewing and signing contracts make sure there is a differing site condition (DSC) clause. If there is not a DSC clause do not sign the contract. When there is not a DSC clause have one recommended by your legal counsel inserted into the contract. In reviewing contracts look for the terms for dispute resolution, claims and delays. Contracts should specify what each party is entitled to and how they should recover it. Fair contracts should share risks between owners and contractors. With the uncertainty of underground construction it is critical to understand the contract and be prepared for the unexpected.

PRE-CLAIM PREPARATION & TRAINING

The process of a construction claim begins long before a claim ever occurs, and needs to be initiated before a project even begins. Important items of preparation need to be set in place before any project starts and must be continued and updated throughout the project. Some significant items include: claim policies, training of personnel, accounting/costing systems, and project documentation.

Claim Policies

Company management needs to have policies in place regarding when and how to pursue claims. Because of the time, effort and money needed in pursuing claims; claims need to have the evidence and support to justify them (Currie 1). Construction companies should have a policy on who approves and who pursues claims. For example the Project Manager can pursue and negotiate claims up to a certain amount, then for the next amount it must be approved by a Vice President and then finally for the highest amount by the President. Contractors need to ask questions like: “How likely are we to be successful on the claim?” “How much time is needed to prepare, present and negotiate our claim?” “Do we have the necessary evidence to support our claim?” If the company feels the claim meets their requirements, the claim should be undertaken. Claim policies should be adapted to meet company needs and should be updated regularly or as needed.

Training of Personnel

Training of personnel is critical in the claims process. Management and field personnel need to be trained on how to handle a claim before it ever occurs. Field personnel need to be trained on what to document on daily reports, what kind of pictures to take, how to record costs and what other supporting documentation they need to keep. Field and supervisory personnel are responsible and must be trained to inform management of actual and potential issues so that project management can immediately assign a cost code and send the necessary notifications. A senior project manger needs to review reports to make sure there is correct coding and segregation of the issue in question. The senior project manger should also review high cost material and subcontractor invoices for correct cost coding. Training should

not be a one time matter but should be continued throughout the project. Personnel should be continually reminded of critical items.

Accounting Systems
Claims are much easier to pursue and are more likely to be successful if all costs are understood and accounted for. Every good accounting system includes a high-quality cost coding system, which is a way to track project costs by codes. Good accounting systems also provide a way to track equipment costs. The costing system should provide a way to account for unexpected or extra items. In today's market there are many software packages that can help and are specifically designed for construction. Software can range from very detailed and expensive to simple and inexpensive. Companies should find software that fits their individual needs, remembering that it needs to accurately record project costs by codes. Good costing systems are imperative because even when contractors are entitled to compensation from a claim they must have the accounting/cost records to justify it. Having a good accounting/coding system is one of the first steps leading to effective claim documentation thus allowing for superb presentation and maximization of recoveries. When these systems are not available the cost of pursuing claims increases and the likelihood of success decreases.

Documentation
A commonly known phrase in construction claims is "whoever has the best documentation wins". Keeping track of documents and accurately documenting what is happening on a project is key to recovery on claims and in dispute situations. Proper documentation allows for more accurate claim recovery and also reduces risk for the contractor. The minimum written records to be kept and documented include: contracts, change orders, all correspondence, meeting minutes, memos, important conversations, diaries, calendars, schedules, trainings, and payment estimates. We will specifically look at four critical areas of documentation needed in claim situations: daily field reports, filing systems, photographs and emails.

Daily Field Reports
Daily field reports become an important asset in claim recovery. Properly kept daily field reports will provide accurate information for manpower and equipment; they will also serve as a diary and provide a place to record other important items. Those individuals filling out field reports need to state facts and not conclusions; they must avoid emotional statements or bias.

Daily Field Reports should record:

- Manpower
- Equipment Use
- Major Events
- Subcontractor Activities
- Safety or Accidents
- Weather Problems
- Oral Conversations
- Visitors
- Work Activities
- Deliveries including quantities
- Problems including those who are involved

Management could also provide field personnel with a checklist of items that need to be included on daily field reports.

Filing Systems
It is vital for management to have a system of keeping and filing documentation. Good documentation is only good if you can find it and then use it. Filing systems need to address who is responsible for what and where the documentation is stored. The filing system could have such categories as: incoming

correspondence, outgoing correspondence, submittals, payments, estimates and subcontractor files. Filing systems can be very detailed or not so sophisticated. But the critical items in documentation are: Do you know where the documents are? And have you kept the right documents? The contractor should have a date stamping method and a distribution method for important documents. Date stamping allows contractors to know when they received documents. Distribution makes sure the appropriate individuals see the documents which, in turn allows them to know issues and respond timely. Having and maintaining an appropriate system of documentation often comes down to the initial training and continued training of field and office personnel. Again field and office personnel must know what to keep and how and where to store it.

Photographs

Another important item in project documentation that is needed in claim situations is photographs. With digital cameras the time, effort, cost and complexity of taking pictures has been reduced. Pictures are often easier to understand than explanations for negotiators, mediators, attorneys, arbitrators, judges and juries. All photographs need to have a description. The description should have enough detail so someone not associated with the project can understand what the photo is. It is often a good idea to keep some of these details in the file name. Photographs should also include a date and time. When there is a claim you can never have too many photographs.

Email

Email is becoming an increasingly important tool used by contractors and owners to manage construction projects. Emails should be saved and can become valuable resources in claims. Those writing emails should be careful not to send emotional emails as they are documents that can be used in litigation settings. Contractors need to manage who is sending what, what they are saying and make sure they are storing the information.

NOTIFICATION

Once your field personnel have informed your project management of an issue and your project management has determined the issue could be a claim, management needs to again review the contract and specifications very carefully. Management needs to understand terms for recovery and send the contractually required notifications. There can be major consequences to not filing contractually required notifications. David H. Bashford of Smith, Currie and Hancock, LLP explains:

> "At the time, it may seem inconvenient or unnecessary to submit a written notice to the owner before proceeding with the extra work encountered on a project, especially if the contractor believes "everyone knows what is going on." However, relying on such a sentiment can be very dangerous, and the results can be severe…courts can and often will strictly enforce written notice requirements, despite harsh consequences; a contractors failure to comply may completely bar its right to recover. Simply, "no written notice" can result in "no claim". (Bashford 478).

It is always safer to understand the contract and understand terms for recovery and send notification even though there are some situations when contractors can get around notification requirements.

USE OF EXPERTS

Underground construction claims can be very complex and necessitate using experts; yet, even some of the most simple projects and claims can benefit from using experts. William Westcott an attorney with Porter & Hedges, LLP has said "A qualified, persuasive, likeable expert can be the key to a successful resolution…Getting an expert involved in the early stages of a dispute can often lead to early settlement" (Westcott, "Expert Testimony in Construction Cases" 10). The use of experts early can also allow them to acquire first-hand knowledge of the events, thus allowing them to become even more credible (Currie 7). Underground contractors could consider experts in accounting, cost analysis, scheduling, geotechnical, and other specialized fields. Contractors should let experts know what they expect including items such as scope, budget and timelines. Finding good credible expert witnesses can often make or break a claim.

PREPARATION, PRESENTATION & MITIGATION OF DAMAGES

The notifications have been sent and project management has assigned a cost code for the claim and all applicable manpower, equipment, material and subcontractor costs are being properly coded. Pictures and other documentation are being kept. The time has now come to prepare the claims, present the claims and mitigate damages caused by the claims.

Preparing and Presenting the Claim
When the time arrives to prepare your claim you will recognize and appreciate the time and effort spent on cost coding systems and appropriate documentation. Having good documentation will allow a much better and easier way to prepare and present an accurate and effective claim. Adequate time should be spent to make sure the claim is documented and supported. Overton A. Currie has said "Your claim should be prepared for presentation with the same detail and thoroughness as if you were preparing it for trial" (Currie 8). Each claim should start with a factual narrative. In addition to the narrative, certain costs need to be identified including: labor, equipment, material and subcontractor costs. Other cost items include: field and home office overhead, profit, delay costs, and scheduling issues. Still other often forgotten costs include indirect items such as inefficiencies, acceleration and escalation costs.

We will first discuss the narrative and then we will take a brief look at each cost item and what is needed for cost quantification.

Narrative
A narrative should be a short factual description of the claim. The narrative could include a short history, why the claim is being filed, a schedule, photographs, graphs and charts, contractual support or entitlement of the claim, expert reports and relevant case history. Narratives should avoid emotional statements, bias or speculation.

Labor
Labor cost needs to quantify labor rates for hourly and salaried employees. Labor does not just include wage or salary but should include full benefits and burdens.
The following tables show items that can be quantified and included in labor costs:

Table 1. Salaried Employees Labor Costs

Salaried Employees Labor Costs		
Base & Burdens	**Company Paid Insurance**	**Other**
Base Salary	Medical	Vacation
FICA	Dental	Holidays
Federal Unemployment	Disability	401K Match
Workers Compensation	Life	Subsistence
State Unemployment	Vision	Lodging
General Liability Insurance		Airfare
If Union – Union Benefits		

Table 2. Hourly Employees Labor Costs

Hourly Employees Labor Costs		
Base & Burdens	**Company Paid Insurance**	**Other**
Straight Time	Medical	Vacation
Overtime	Dental	Holidays
Double-time	Disability	401K Match
FICA	Life	Subsistence
Federal Unemployment	Vision	Lodging
State Unemployment		Airfare
Workers Compensation		
General Liability Insurance		

Table 3. Union Hourly Employees Labor Costs

Union Hourly Employees Labor Costs		
Base & Burdens	**Union Fringes**	**Other**
Straight Time	Health & Welfare	Per Diem
Overtime	Pension	Lodging
Double-time	Training	Air Fare
FICA	Vacation	
Federal Unemployment	Administration	
State Unemployment	Holidays	
Workers Compensation		
General Liability Insurance		
Union Benefits		

Equipment

Equipment rates are often specified by the contract, often these rates are “Blue Book” rates or specific state approved rates. However, because underground construction uses specialized equipment that is often not included in the list of rates, contractors still need to account for their equipment costs. Equipment needs to be quantified with rates that include ownership rates and operating rates. Equipment that is rented also needs to be quantified in a similar manner. The following table shows items that can be quantified into contractor generated equipment rates.

Table 4. Equipment Costs

EQUIPMENT	
OWNED	RENTED
Ownership Cost	Ownership Cost
Depreciation	Rental With Tax
Interest	Insurance
Insurance	Personal Property Tax
Personal Property Tax	Shop Overhead
Shop Overhead	
Operating Costs	Operating Costs
Hourly Repairs	Hourly Repairs
Hourly Fuel/Lube	Hourly Fuel/Lube
Shop Overhead	Shop Overhead

Material & Subcontractor
Material and Subcontractor costs should be quantified by using actual invoices, contractually allowed markups can then be added to the total costs. The important thing with material and subcontractor costs is to make sure they are cost coded properly and thus not inadvertently over or understated.

Field Overhead
Field Overhead is used to quantify overhead costs that are incurred in the field. The following table shows items that might qualify as field overhead costs.

Table 5. Field Overhead Items

Possible Field Overhead Items	
Airfare - Home Office Personnel	Office Trash Removal
Builders Risk Insurance	Office/Field Water Ice
Cell Phones	Portable Toilets
Engineers' Office Rent	Postage & Shipping
Field Office Expenses	Safety Supplies
Insurances Required by contract	Telephones
Lodging - Home Office Personnel	Utilities
Miscellaneous Expenses	Yard Rent
Office Security	Yard Tools & Supplies
Office Trailer Rental	

Home Office Overhead
Home office overhead costs are those costs incurred by the home office in support of the project. Normally the contract prescribes the home office overhead rates to be used. If the contract does not specify rates, contractors can use a variety of methods to come up with home office overhead. There is not a standard method in computing home office overhead; however, a commonly used method of calculating home office overhead is the Eichleay Formula. The Eichleay formula consists of the following:

Formula 1. Eichleay

EICHLEAY FORMULA				
$\frac{\text{Contract Billings}}{\text{Total Company Billings}}$	X	Total Company Overhead	=	Overhead Allocable to Contract

To get a per day costs the overhead allocable to the contract is divided by actual contract performance days. For Example:

Example 1: Eichleay

$\frac{\$\ 3,500,000}{\$\ 15,000,000}$	X	$ 1,400,000	=	$ 326,667
$\frac{\$\ 326,667}{125\ \text{cd's}}$	=	$ 2,613.33/cd		

We will not discuss other methods in this paper however some other methods for computing home office overhead include Modified Eichleay Formulas, the Hudson Formula, the Ernstrom Formula, the Manshul Formula, and the Carteret Formula. See Zack, Jr., James G. “Calculation and Recovery of Home Office Overhead” for further discussion on these methods.

Profit
A profit percentage should be added to total field costs (Labor, Equipment, Material, Subcontractors & Field Overhead). The profit percentage is usually specified in the contract. If it is not in the contract there are several methods for adding profit, including using the profit percentage in the original bid.

Scheduling/Delay/Liquidated Damages
Delay costs can be quantified by using critical path method (CPM) schedules. CPM schedules can show the time period delay caused by the claims. Costs are quantified by taking daily field rates times the days of delay. Schedules can also serve as a valuable method in defense of waiving liquidated damages. Scheduling is often an area where the use of an expert is valuable.

Inefficiencies / Productivity Losses
Claims have an indirect effect on other contract work causing inefficiencies. Computing inefficiencies and productivity loss can be very complex for significant claims, thus use of an expert should be considered. One method of proving inefficiency losses is the measured mile approach. Gregory J Dukellis attorney for Watt, Tieder, Hoffar & Fitzgerald, LLP explains "This method is best used when a project has a clearly defined un-impacted portion, versus an impacted portion, of similar work. Normal productivity and unit costs of the un-impacted portion of the project serve as the base-line to compare to the actual costs and productivity achieved during the impacted portion of the project" (Dukellis 2). There are other methods that have been used successfully in court situations that will not be discussed here, see Dukellis, Gregory J. "Proving Productivity Losses" for more.

Escalation
Escalation is increased costs due to continuing price change over time. Construction costs have been escalating extremely fast in the past few years. Escalation costs are related to scheduling/delay costs. If the delay is not the contractor's responsibility then the costs of escalation incurred should be recoverable. These costs are extras caused by the delay of the project like increased labor, equipment, material or subcontractor costs. For example it is easy to show material escalation costs. In one period you paid $1.00 for X and the next period you paid $1.50 for X, thus a $.50 escalation cost.

Acceleration
Acceleration costs may be incurred when the completion date of a project is not extended when there is a claim or if an owner decreases the contractual time of the project. The Illinois Department of Transportation has said the following concerning acceleration:

> "The Department recognizes that there are direct and indirect expenses involved in accelerating the work, which are not accounted for in the bid prices. Payments for acceleration is intended to make the contractor whole for legitimate expenses which the contractor incurs due to the acceleration: expenses which are above and beyond what the Contractor would have incurred at the Contractor's established or expected rate of progress" (IDOT 1).

Acceleration costs can include items that are needed to finish the project in accelerated time, such as increased labor, equipment, materials, subcontractors, premiums, inefficiencies and greater field overhead.

Mitigating Further Damages Caused by Claims
Claims have can have an indirect effect on projects and significant claims can effect the whole company. Claims diminish resources, take time of management and often effect a company's cash flow.

Project management needs to carefully watch costs, budgets and schedules. Project personnel should keep an as built schedule and carefully compare it to the base line schedule. Costs and budgets should be compared to look for areas of variance. Company management needs to make sure that claims don't become so engrossing that there is a loss of fundamental business attention. Significant claims may put contractors in survival mode; however one of the worst things to do is to forget fundamentals.

Management needs to make sure project personnel don't get an attitude that everything is a claim or change order and it will be recovered This attitude can delay the overall project and cost the contractor much more than focusing on completing the project.

Updating the Claim
Negotiations and other agreements may necessitate revisions to claims. Some other revisions might also be needed because the project has finished. Often the original claim might contain costs that were to come or that were estimated. These costs need to be revised to actual costs to make the claim more accurate.

Avoiding False Claims
False Claims are becoming increasingly more intimidating to contractors who do work for government institutions. Contractors therefore must be aware of what false claims are. A paper entitled "A Checklist to Avoid False Claims" by Dr. William Ibbs, et al. highlights some important items for avoiding false claims. They include: "Being Honest, Not hesitating to consult lawyers and experts, maintaining complete project records, carefully screening pass-though costs, being careful in calculations, verifying factual assertions, and being prepared to present auditable backup (4-5). The main point to avoid false claims— do not assert anything that is not true and supportable.

NEGOTIATION/DISPUTE RESOLUTION

Negotiating the Claim
The first thing to do is develop your negotiation strategy. What do you want to get out of the claim and how are you going to get it. Decide who will be responsible for presenting and negotiating your claim. Plan to use a win/win style of solving the problem instead of pointing fingers. Try to find areas where you have common ground. In negotiating *be prepared*; make sure you have the claim, notes and documentation accessible. Have more backup information than you think you need. The other side will notice how prepared you are and how well you know your information. Anticipate where your weaknesses are and how you will respond to them.

Make sure that you establish a dialog with people in authority to make decisions. Find out who has the authority to settle the claim. Nothing is more frustrating than agreeing on a settlement only to find out that the person did not have authority to make the settlement.

In the negotiation make sure you leave yourself options as more information becomes available. Do not settle to early because significant problems often become worse than expected. Plan to overcome the hard dollar bid attitude: contractors don't mark up their bid for claims and differing site conditions and the owners do not pay for them until something happens. When you get in a bind and don't know what to say repeat earlier statements and positions.

Dispute Resolution
No matter how unlikely it may seem, a contractor needs to be prepared for mediation, arbitration or litigation. Keeping proper records and documentation is key in this process. Recording events and conversations as they happen can provide invaluable information in legal settings.

Litigation should be considered as a last resort because the time, energy, and cost of litigation is enormous. Good legal council is important to evaluate claims and give realistic expectations for the claims. The importance of good legal council can never be underestimated in presenting and litigating your claims. If you have prepared and documented your claims correctly your prior preparation will now yield dividends. This is because your preparation of the claim and of your documentation was already up to legal and auditable standards. Contractors will be able to give legal council the necessary support they need to litigate your claim.

If you must litigate it is critical to obtain quality experts who can interpret your information and present it in a clear, understandable and compelling way. Even simple construction claims can benefit from the use of experts. Experts should be able to defend and not waiver on their positions.

CONCLUSIONS

Remember as an underground contractor, the question is not will I ever have to file a claim but, will I be prepared when a claim has to be filed. It is imperative to understand how to prepare for, document and present an underground construction claim. Preparation must take place before a claim ever occurs, systems for costing and documentation must be in place and continued training of personnel must not be neglected.

When the time comes to prepare present and negotiate a claim, systems and training will allow for proper and accurate claims. Presenting each claim is unique, yet the need to capture labor, equipment, material and subcontractor costs is always essential. When negotiating the claim, have a strategy and know what you are trying to accomplish. Watch the project and other business activities closely for slippage and make sure claims don't become so engrossing that there is a loss of focus on business fundamentals. Don't let the claim create losses on other projects and in other areas of the business.

Preparation is always a key; it is cheaper and more efficient if you are prepared and know what to do before there is a claim. Be prepared in negotiating and have a strategy. Always consider litigation as a last resort but never relinquish your rights to do so.

Underground construction claims are unique and take time, effort and persistence. Being prepared for when not if an underground construction claims happens will maximize recoveries and minimize effects on other business activities.

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