Construction Audit: An Audit That Pays For Itself

Introduction

For many organizations, construction projects can top a company's list of presenting one of the largest and most complicated financial endeavors. Due to their complex nature, construction projects are often vulnerable to poor project set up, poor record keeping, misappropriation of assets, cost overruns, theft, kickbacks, unforeseen modifications, delays in completion and sometimes even the failure to complete the project.

One of the most powerful tools to monitor the progress and control the cost of a construction project is by means of performing comprehensive construction audits throughout the lifecycle of a capital investment. A holistic approach to Construction Auditing, if done correctly and by implementing the right approach, can not only mitigate the myriad of risks such projects present, but Construction Audits performed correctly and with the right professionals can also result in a profitable exercise.

Phases of Construction Audit

To maximize cost savings, all phases of the construction project life cycle should be subject to audit. The sooner the audit or compliance function is engaged in the process, the better. There are typically four distinct phases to the construction audit lifecycle:

Planning Phase	The first step in controlling construction costs is to verify that sufficient study has been conducted to compare different alternatives of design, engineering system, choices of materials, etc. The most efficient alternative should be selected.
Contracting Phase	Documentation such as contract, memorandum of justification, drawings, specifications, addenda, etc., should be verified for completeness and proper authorization. These documents should be well coordinated and any incompatible terms should be identified and revised. A well-coordinated set of authorization documents will minimize conflicts and cost overruns during the construction phase. The "subject to audit" or "right to audit" clause should be included or strengthened.

Construction Phase	Construction audit during this phase serves to monitor and keep the project on track or helps it get back on track quickly. Overcharges are identified at this phase. Each type of overcharge should be analyzed and its cause determined. Such analysis helps prevent or minimize the chance of avoidable costs from happening again, or at least help identifying similar costs in the future. Controls should be formulated to achieve this purpose. The findings should be communicated to the Contractor. Any disagreements should deal with immediately and ideally be resolved before similar situations arise again. This will keep surprises at the end of the project to a minimum, which are usually more difficult and costly to deal with.
Closeout Phase	The final phase of the construction audit assists in wrapping up the project and determines its total audited costs. Once the results are agreed by the contractor, the retained amount over the difference between the total audited costs minus the total paid amount to-date can be released to the contractor. If the contractor disputes the audit results and provides further documentation to substantiate the disputes, an addendum audit could be performed, which will delay the contract closeout and release of the retained amount.

Types of Construction Contracts

Contracts are usually classified as Lump Sum, Unit Price, Cost Plus, or Time and Materials. All types of contracts should be audited.

Lump Sum:

A lump sum or fixed fee contract is one that the contractor will complete the project for an agreed price, despite unforeseen costs that might incur during the construction phase. As it might seem the owner is not exposed to any risk of cost overrun, lump sum projects do possess hidden risks, such as:

- Contractor used materials outside of contract specification or applied improper construction method, thus rendering the structure unsafe or shortening the useful life of the structure.
- Specified quantities are not installed or owner supplied labor and materials not properly credited, resulting in de facto overcharges.
- Unauthorized subcontractor was used resulting in substandard service.
- Insurance or bond required to be procured by contractor was not purchased, resulting in potential loss or liability due to contractor's failure to comply the contract terms or to complete the project.
- Change orders may be initiated by the contractor to modify the contract and thus increases the cost of the project. Besides, change orders may not be priced correctly.

An audit should therefore be performed to mitigate the risks listed above.

Unit Price:

The Unit Price contract method is used when the contractor bids a set price per unit where the number of units has not been determined when the contract is bid. Inherent risks exist for unit price contracts such as:

- Improper method in measuring the quantity installed or used.
- Unit price based on a published index could be misapplied or calculated incorrectly.

An audit would help verify that the proper measurement method is used and all calculations are correct.

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Cost-Plus and Time & Material:

In a Cost-Plus contract, the contractor is paid for all of its allowed expenses plus a fixed or percentage fee. In a Time and Material (T&M) contract, the contractor is paid direct labor hours at a fixed rate and the cost of materials and other allowable costs.

Under a Cost-Plus or T&M contract, the contractor has no incentive to minimize the labor hours spent on the project. The less efficient the contractor becomes; the more money it makes. The same is also true if the cost plus fee is a percentage on the costs incurred. The higher the cost, the more profit the contractor will make.

This is why construction audit should be most rigorous and extensive when it comes to Cost-Plus and T&M contracts. We will discuss in details with examples on each component of these types of contracts. The major components are:

- Labor charges
- Material costs
- Equipment rental
- Contractor's fees

Labor Charges

Labor charges can be analyzed through two components: labor hours and labor rates.

Labor Hours:

Construction auditors should verify billed labor hours through inspection of daily tickets or narratives, which record the names of all workers on each day with their respective working hours. The type of shift and the start and end time should be used to determine whether the hours are straight time or overtime. The daily tickets or narratives should be signed and approved by both owner's and contractor's representative on site.

Look out for ghost employees. Contractors may charge hours for an employee who does not exist or an employee who did not work on certain days.

As deterrence against collusion between the owner's representative and the contractor, the supervisor of the owner's representative should review signed daily tickets to assess whether the hours are reasonable.

Labor Rates:

If the labor rate is fixed as in most T&M contracts, the construction auditor should verify that the contractor only billed the negotiated rate specified in the contract, not the contractor's official rate. When the labor rates vary according to who are working and when work is performed, as in Cost-Plus contracts, the auditor will have a lot more to verify.

Even small rate overcharges can really add up fast if the project requires significant number of workers for an extended period of time.

Labor rates typically compose of the following components:

- Base rate
- Payroll taxes (FICA, FUTA, SUI, etc.)
- Fringe Benefits (union funds, pension, etc.)
- Other Allowances (overhead, mark up, holiday, bonus, worker's compensation, small tools, etc.)

In order for auditors to have a meaningful analysis of labor rates, always ask the contractor to provide a breakdown of rates. Often times, construction projects involve skilled workers who belong to a trade union and are being paid wages bound by union contract. A union contract and union supplements for relevant periods should be obtained for each trade to verify base rates and fringe benefits. Attention should be paid to the following areas:

- If an employee is paid above union scale, pre-approval by owner should first be obtained. Otherwise, the premium portion will be disallowed.
- Base rates should be verified through contractor's payroll registers, preferably prepared by a third party service provider.
- Beware that the contractor may put in more foremen than necessary on a particular job. For example, if the job requires only one foreman for every five journeymen, then the auditor should question a situation why there are four foremen but only one journeyman placed on site.
- Federal and most states' unemployment insurances have ceilings as to how much an employer has to pay for each employee. Therefore, simply applying the contractor's assigned rates from Federal and local authorities to the base rate will result in overpaying the contractor. The auditor should, instead, calculate an effective rate for each year using information from the contractor's tax returns and applies it to the base rate. (Note: an employee's portion of SUI should be excluded from the effective rate since it is an employee's deduction and not an employer's expense).
- Since social security taxes have ceilings as well, therefore, for well paid employees, an effective rate should also be calculated and applied.
- Items in union fringe benefits that are employee's deductions are not reimbursable since the contractor did not incur those expenses.
- Political funds, which could be a standard item in union fringe benefits, may not be reimbursable, if the contract excludes political contributions.
- Do not assume that all fringe benefits are paid one and a half times or two times when it comes to overtime or double time. Some trade unions' fringe benefits or at least certain components of them remain a constant even for overtime hours or capped at 1.5 times. Detailed verification with union agreement for each component is warranted.
- Holiday allowance should be excluded if holiday pays are reimbursed and vice versa to avoid duplicate payments.
- Small tool allowance in labor rates should be disallowed if the contract excludes small tool reimbursement.
- Contractor may add a profit component to labor rates such as overhead allowance or mark-up percentage. These allowances should be taken out if, by contract, contractor's profit is realized through contractor's fee.
- For relevant trades, final audited worker's compensation rate provided by insurance company should be compared to the billed rate. Adjustment should take into account of ceiling and overtime hours.

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Material Costs

Some contracts allow contractors to enjoy a higher fee on material costs than equipment and subcontractor charges. This provides an incentive for contractors to bill equipment or subcontractor charges as material costs. These charges should be reclassified.

Excessive material usage is another common concern. A knowledgeable inspector should be deployed at the site to approve material usage according to the work progress. Approved daily tickets with description of material usage should be reviewed by the inspector's supervisor for reasonableness.

If rework is required for a certain phase of the project, new materials installed or used might need to be discarded and ordered again. The liability of replacement materials together with related labor and other costs should be determined. If the contractor is liable for the costs, the auditor should follow through to ensure that any billings relating to rework would be disallowed.

Any scraps and returns should be logged and credit calculated used to reduce material costs. At completion, any materials remained on site should be accounted for and salvaged.

For governmental agencies, charitable or other exempt organizations, auditors should ensure that sales taxes are excluded from material costs.

Vendor quotes or purchase orders should never be accepted as evidence of purchase. Only vendor invoice should be accepted. Otherwise, the contractor could bill the same charge twice under two separate bills, one supported by an invoice and the other supported by a purchase order or quote document.

Large material purchases should also be verified by cancelled checks as proof that the contractor did incur the costs. Any discounts the contractor received from the material vendor should be passed on to the owner.

Equipment Rental

Many contracts specify that whenever the contractor supplies the equipment necessary for the project, it will be entitled to reimbursement of rental and operating costs. Some contracts exclude operating costs and allow a higher fee instead to cover the overhead. The Rental Rate Blue Book for Construction Equipment (or the Blue Book) is a widely accepted industry guide that many contracts refer to as the basis of reimbursing equipment charges.

The auditor should be aware of the following areas when auditing equipment charges:

- The contract may allow contractor to charge rental based on monthly, weekly and daily rates, depending on the length of deployment of an item in a period. When translated into hourly rates, daily rate is the highest and monthly the lowest. Contractor may be tempted to break up a work period and bill each day separately with a separate invoice, using daily rates. Efforts should be made to determine the true period of deployment and appropriate rates be assigned accordingly.
- When the contractor fails to provide enough specification details for the purpose of identifying an equipment item in the Blue Book, it is recommended that the owner should reimburse only the lowest rate for that class of equipment.
- If an equipment item is deployed for a lengthy period, it is possible that the rental charge will eventually exceed its purchase price. It is recommended that a clause be included in the contract to give the owner the option to purchase the item, thus limiting the rental to the purchase price plus fee.
- Care should be exercised when auditing the operating costs. Do not assume that the rental hours and operating hours are the same. Often times, the inspector signed on daily tickets that allowed only rental hours to be filled in and no room for operating hours. Therefore, the contractor will assume that the equipment was operating for the duration of the rental and bills as such. The auditor should recommend that the daily ticket form be redesigned to allow operating hours to be filled in.

- At times, there are more equipment pieces than the number of workers on site. Since it is physically impossible to operate two equipment pieces at the same time by any worker, therefore, auditor should make sure the total operating hours do not exceed the total labor hours or total operating hours of a certain class of equipment does not exceed the total hours of a relevant trade.
- Beware of fuel or gasoline charges. Those charges should have already been covered by the operating costs or contractor's fee.
- Third party rentals should be compared to Blue Book to verify reasonableness. If the rate is higher than the Blue Book rate, the owner should have the option to use Blue Book rate instead. The rental period stated on the invoice should match the work period. If the rental period is longer than the work period, the rental charge should be pro-rated. Components of the rental should be examined to determine whether certain charges should be disallowed such as insurance or fuel charges.
- In emergency delays, only rental costs will be reimbursed, not operating costs.

Contractor's Fees

In Cost-Plus contracts, a contractor will be rewarded a fee, which is either fixed or variable based on a formula of percentages. The fee allows the contractor to cover overheads and perhaps make a profit.

If labor and material charges command a higher fee percentage than equipment and subcontracting services, the contractor will have tendency to move equipment and subcontracting expenses to under labor and material. The auditor, therefore, should exercise care in classifying all expenditures correctly, in order to avoid overpaying the fees.

Many contracts allow the general contractor (GC) to collect a fee based on the subcontractor's costs, regardless of how many levels of subcontracting are involved. Sometimes a subcontractor will hire a sub-subcontractor to help perform part of the work. The GC may bill the fee twice as there are two levels of subcontracting work. The auditor should ensure that the GC is entitled to subcontractor's fee only once.

Sometimes a subcontractor is actually just another company directly controlled by the GC's company or owners. Such companies are not genuine subcontractors and the GC is not entitled to a subcontractor's fee.

Duplicate Charges

Duplicate charges are some of the most common overcharges. They could come in the following forms:

- Contractor submits the same bill twice at different periods that are subject to different interim audits.
- Contractor submits essentially the same charge but under different invoices.
- Same bill could be submitted under different drawings or net cost items.
- Same charges could be submitted more than once under different expense categories to make them appeared as if they are different charges.

Auditors should remain alert to possibilities of duplicate billings; maintain a tracking mechanism and recommend manual and/or system controls to mitigate the risk.

Conclusion

Construction projects are costly with abundant opportunities for overcharges. The above discussions are just some of the examples of overcharges. Construction audit provides an effective means to identify and recover these overcharges. Construction audit also acts as a tool to keep projects on track, helps identify cost savings, reduce possibility of litigations and helps identify and develop new controls. With the potential in reaping such tangible benefits, construction audit proves to be an audit that pays for itself.

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Construction Audit

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