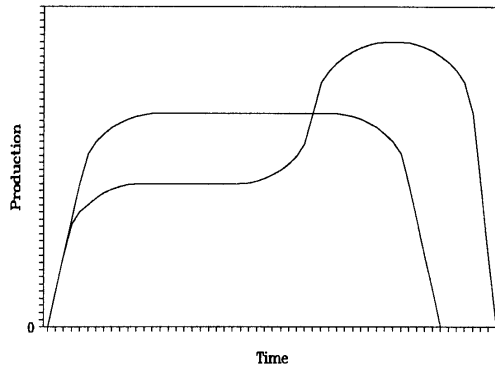


# Construction Delay Claims

Special Tutorial Edition

with

**Assessments of Project Completion,  
Productivity, Overheads, and Profit**



***Arthur O.R. Thormann***

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## **Motto**

To reduce claims, prepare for them!

## **Dedication**

To Estimators,  
who must anticipate the probabilities;  
To Project Managers,  
who often complete projects against the odds;  
To Construction Owners,  
who will always gain by aiding the process;  
and  
To the Legal Profession,  
who tries to make sense of it all.

## **Appreciation**

I also wish to extend a special thanks to  
Robert Blakely, Robert Riddle, Barbara Every,  
David Tettensor, Lawrence Donnelly,  
Nancy Thormann, Casey Skakun,  
and William Kenny  
for their valuable critiques.

*Preface*  
*by*  
*Robert S. Riddle, L.L.B.*

---

The construction process is a complex undertaking. This is true no matter if the project to be constructed is a home, a commercial building, an institutional building such as a hospital, or an industrial facility such as an oil refinery or a hydroelectric dam. The successful completion of the project requires the contractor to plan and execute the integration of materials, labor, and services into the cohesive whole, the completed project.

As is quite often the case, when the contractor has provided a firm price for the completed project, he is obliged to work and plan efficiently in order to realize a profit for his efforts. Problems with either the planning or the execution have an impact on the final costs to construct, and an adverse effect on the expected profit. If the problems encountered result from the actions or inaction of others, then the contractor may have a claim for damages suffered due to the disruptions and delays. Conversely, the owner may have a claim against the contractor if the contractor caused a delay to the completion of the facility.

The preparation and presentation of a construction delay claim can be a daunting prospect. It can entail a level of complexity similar to the construction project itself. There are a number of experts or consultants that specialize in preparation and presentation of delay claims. However, understanding the process, the cause of the delay, the effect on profits, and how to properly assess and present a claim is useful information for a wide-ranging group of individuals including the contractor and his staff, owners, developers, design teams, quality control and assurance groups, lawyers, accountants, and insurers.

Arthur Thormann has been actively involved in the construction industry for close to fifty years. In this period, he has been an apprentice, a tradesman, a project manager of construction projects, a manager of large construction corporations, and a consultant to various groups within the construction industry. For the better part of this period, he has also been called upon to assemble, present, or resolve construction disputes and claims, including those caused by delay, or including delay components. As a result of his experiences and to assist others who may encounter similar situations, Mr. Thormann has consolidated and distilled his knowledge into the book you are about to read. He has prepared a cohesive guide designed to assist anyone who is faced with the need

either to assemble or to understand the foundation of a delay claim.

Mr. Thormann begins with the estimating process and then takes the reader through the construction process: how to keep documentary records; how to identify, quantify, and address disruptions and delays; the importance of mitigating their effects; and how to recover their inevitable damages – in short, the A to Z of construction delay claims.

As a barrister and solicitor, and as a member of the Alberta Bar, my practice is primarily restricted to the areas of corporate commercial matters and construction law. Prior to entering the practice of law, I was myself actively involved in the Alberta construction industry as a contractor for many years. In the past few years, I have had the opportunity of working with Mr. Thormann on projects with delay components and have personally had the benefit of his insights and comments on the issue of delay and delay claims. Mr. Thormann has taken the time and effort to assemble his views and experience on delay and delay claims, and has thereby made his expertise available to a wider group. I heartily recommend the book to you.

*Introduction*  
*by*  
*Author*

---

Construction is often performed with delays and/or disruptions. When this happens, the contractor not only loses time, but also incurs additional overheads and production costs. Furthermore, because most projects are intended to produce revenue, the owner, too, incurs losses if the completion date is delayed.

To some extent, the effects of disruptions and delays can be reduced through anticipation, organization, and mitigation. However, sometimes the damages are serious enough that neither the contractor nor the owner is in a position to absorb them, and delay claims may be unavoidable.

When delay claims are unavoidable, a host of questions must be answered: What were the exact causes? Who is responsible? What were the effects? How were the damages mitigated? Were the legal requirements of the contract followed? Are the damages properly quantified? and so on. Furthermore, because the cost of disruptions and delays never produces anything tangible, nobody is happy and emotions run high.

Nevertheless, a good understanding of the issues goes a long way to help alleviate and resolve the problems. This book attempts to provide the basics for this understanding. The main points discussed in the book are as follows:

- The onus is on estimators to anticipate likely disruptions and delays and to make adjustments, both to their original tenders and to the quotations for contract changes – especially if these contract changes impact the work in progress, including that for previous contract changes.
- Every tender should include an elementary construction schedule.
- The format of the construction schedule should be designed to include expected disruptions and delays during construction and, preferably, their effects.
- It is advisable to use a construction progress measuring system in addition to the construction schedule, to more accurately measure the construction progress and any productivity losses.
- Weekly progress reports should be issued to record the work done in the past week, the work planned for the next week, and any constraints encountered. These reports can also act as

- notices of the constraints.
- Productivity-loss assessments should be made as soon as the loss occurs and should be included in the delay and disruption notices.
  - Project management systems should include sound practices to keep track of and evaluate disruptions and delays. These practices often help to reduce claims.
  - If the damages of disruptions and delays cannot be sufficiently mitigated or absorbed, negotiations for reimbursements should begin when the losses occur and not at some later date.
  - If a claim submission is unavoidable, it should be brief, to the point, and with convincing explanations of the causes and the damages incurred.
  - Damages for disruptions and delays are normally limited to productivity, overhead, and profit losses, and the parties involved in a claim should be well versed in these concepts.
  - When looking for the help of a lawyer or a claims expert, it pays to get the best and to make sure he or she is well informed.
  - Negotiations for settlement should continue even after the claim is submitted, and one should never lose sight of the business relations angle. It is a long road that does not have a curve in it somewhere.

The subject of production losses is somewhat lengthy, and, rather than expanding the main text, I have provided more detail in an appendix. For the convenience of the reader, I have also included a glossary of construction terms and related concepts, a bibliography of related subjects, and an index.

With respect to gender, number, and generic terms, for the sake of simplicity, I have used masculine pronouns to include the feminine. This use is neither an oversight nor intended as a slight to women, whose roles in the construction industry are of ever-increasing importance. Wherever the masculine and/or singular is used and the context permits, the same shall apply to the feminine and/or the plural, and vice versa. The term *contractor* is intended, in most cases, to include subcontractors; when distinctions are necessary, the terms *general contractor* and *subcontractor* are used.

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# 1

## *The Onus on Estimates, Tenders, and Contract Changes*

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### GENERAL COMMENTS

Very few projects are constructed without disruptions and delays, but estimators tend to favor the bright side: these problems may not arise on the project under consideration. Even when experience has proven that disruptions and delays do occur, there have often been extenuating circumstances to explain them, and the estimator hopes that lightning will not strike twice in the same place — unfortunately, it often does.

The causes for disruptions and delays are numerous, and most of them can be anticipated. The questions are, how likely is it that they will occur, and, if they do occur, how severe will they be? All too often, estimators will be over-optimistic when answering these questions. When disruptions and delays do occur and the estimate has not provided for them, contractors may want to pass the costs on to others. However, passing the costs on seldom works if it can be shown that the disruptions or the delays, or both, should have been anticipated by the estimator, regardless of their likelihood to occur.

I know of a number of cases involving severe weather conditions that were hard to anticipate. I also know that the contractor involved in each case experienced big losses because of the disruptions and delays, but the construction owners were unwilling even to consider a claim for damages, and were sometimes hard-pressed to allow an extension to the completion dates; instead, they required the contractors to accelerate the work. The same thing can happen with other delays that may be out of the contractor's control but should have been anticipated, even if their likelihood to occur was remote. Often, when the contractor does not anticipate disruptions and delays, the owner considers this oversight as one of the contractor's shortcomings.

The practical implication is this: when disruptions and delays occur that were impossible to anticipate and are clearly not the contractor's fault, they are often intermingled with the contractor's shortcomings and are consequently hard to isolate and hard to get the owner to accept. The owner, who is normally well represented at construction sites, usually keeps his own record of all that happens on site and can often make a good case of the contractor's shortcomings. Therefore, the contractor is well advised to keep his shortcomings to a minimum. Furthermore, there is a practical limit to allowing for all possible disruptions and delays, but the contractor should know the arguments that will face him.

## **JOB FACTORS**

Estimates for construction work are usually adjusted for all kinds of factors that may affect the productivity of the installation labor. These factors are generally referred to as job factors. The estimator must consider making labor adjustments for a great variety of such factors, for example:

- remote geographic locations;
- adverse weather conditions;
- complexity of installation;
- poor design drawings or specifications;
- unknown productivity of strange crews;
- unfamiliar construction, conditions, or work;
- building renovations;
- partially or wholly occupied buildings;
- spread-out work areas (e.g., industrial sites);
- anticipated schedule delays (for whatever reason);
- anticipated work disruptions (for whatever reason).

These are but a few of the job factors that the estimator must consider with every estimate. Wrong evaluations for adjustments will invariably cause labor overruns. Even relatively small estimates, for example, extra work required by an owner, should be adjusted for such job factors.

If the contractor's labor has not been properly adjusted for some obviously required job factors, serious problems can develop when a delay claim arises, since the respondent to the claim will usually look for any and all shortcomings by the contractor in order to reduce the claim costs. (The Appendix provides some details of these problems.)

## **QUALIFYING TENDERS**

Some owners take a dim view of tender qualifications, and contractors should beware of qualifications that could get their tenders rejected. However, some qualifications are absolutely necessary, and contractors would be remiss in their duty to the owner to omit them.

If a contractor becomes aware of problems that could cause serious disruptions and delays to the construction schedule, for example, he should make the owner aware of these problems. Some contractors are reluctant to do so, fearing they may lose the contract. In these cases, hard feelings and conflicts may arise during construction, and the reception of delay claims is usually affected as well. Gaining a contract under these circumstances is seldom profitable, and the contractor is well advised to qualify his tender.

## **INCLUDING A PRELIMINARY SCHEDULE WITH THE TENDER**

Normally, a contractor prepares a construction schedule after entering into a contract, but there is much to be said in favor of preparing a schedule during the tender period — at least on a preliminary basis. Both the owner and the contractor, for different reasons, should be interested in the start and completion dates of construction. Milestone dates for major construction phases are also useful.

If a contractor submits a preliminary construction schedule with his tender, there can be no doubt in the future about his intentions and what his tender was based on. Construction schedules that are submitted after contract awards, sometimes not until many weeks after construction has started, frequently leave a doubt in the owner's mind as to what the tender was based on, especially when schedule changes become necessary. It is critical to remove such doubt to avoid a dispute over the initial intent.

Submitting a preliminary construction schedule with the tender is even more important to a subcontractor than to a general contractor, since a subcontractor is interested in various start and completion dates during the course of construction. However, it is useful for a general contractor to have each subcontractor's input before submitting his own schedule, especially if subcontractors supply materials for critical tasks.

Sometimes a simple schedule that shows a few milestone dates, all critical tasks, and the amount of float time for noncritical tasks is better than one with a complex network of tasks, dates, and dependencies that takes many weeks or months to prepare and an enormous effort to update regularly to be useful. Such a schedule can be hand-drawn, prepared with a computer program such as Microsoft's *Project*, or created in a word-processing program (see Figure 1-1).

Thinking in terms of a construction schedule can also change the way an estimator prepares his take-offs and divides his labor estimate. This division can be useful if manpower loading is to be included with the schedule and as a tool for the project manager in the assessments of the completion status of the project and possible productivity losses. Quite often the value of preparing a simple schedule during the tender period far outweighs the small cost involved to do so.

## **ASSURING CONTRACT CHANGES INCLUDE IMPACT COSTS**

When preparing quotes for contract changes, contractors should consider all possible impact costs and make owners aware of them. These impact costs are often overlooked until later, usually towards the end of construction, when the contractor realizes that their cumulative effect is

more than he can absorb. At this time, the owner may not be receptive to a claim for these impacts, and understandably so, because mitigation is no longer possible. A subcontractor should also be aware of other subcontractors' changes, because these changes, too, can have disruptive and delaying effects on his unfinished work and should, therefore, be priced and quoted, if only for their impacts.

### **TYPES OF IMPACT COST**

The impacts caused by change orders to the contracted work are mostly of a disruptive nature and mostly to the work in progress, including previously contracted change orders. In this regard, construction is not too different from assembly lines. If you were to request changes to your car while it is being assembled, the cost of the car would be prohibitive.

Requests for clarification (RFCs) can also disrupt the work while the contractor awaits an answer, although RFCs may *not* end up in contract changes that were priced by the contractor. If this is the case, the contractor should promptly notify the owner's representative and request a contract change, both for schedule delays and impact costs involved. The problem is that, although these disruptions may be insignificant individually, collectively they can cause enormous damage.

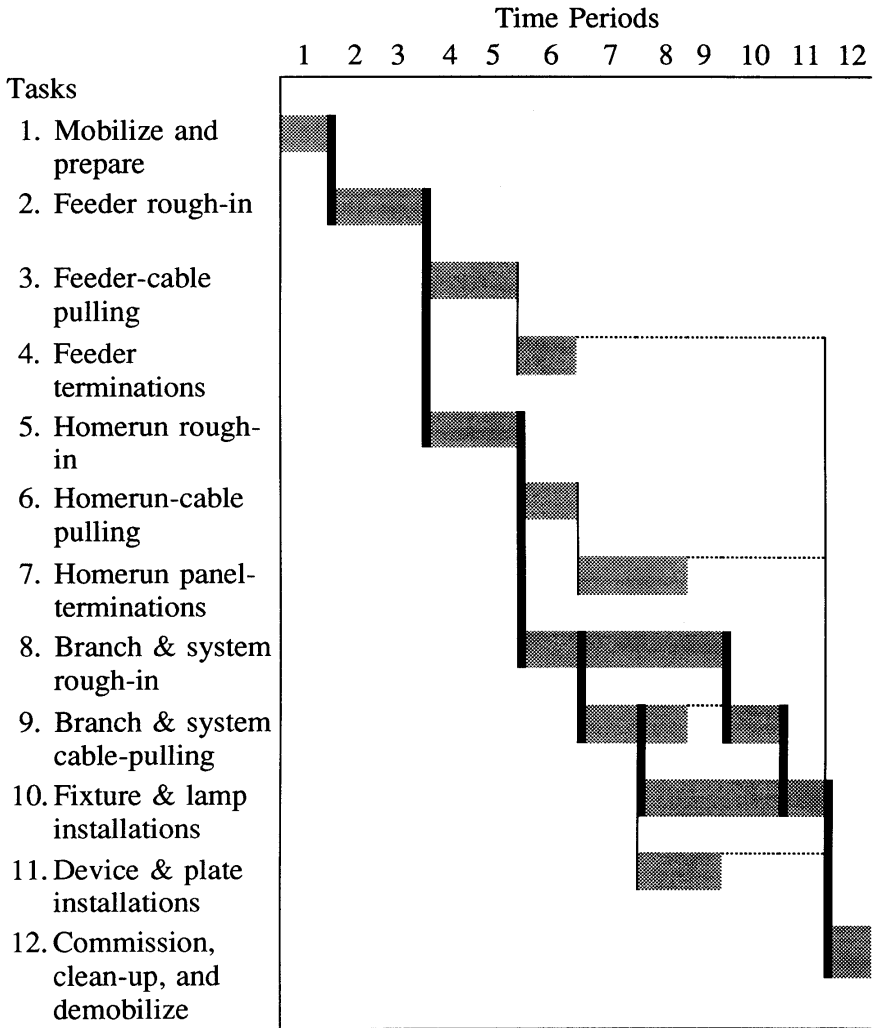
Some changes to the contract may require materials with fairly lengthy deliveries that may delay the completion of the entire project; since another trade may cause such a delay, each subcontractor should be afforded the opportunity to evaluate the impact on his work. Other changes to the contract could push summer work into winter, with the effects of adverse weather conditions as the impact. This impact can occur not only to the immediate work affected by the change but also to other parts of the contract. Even worse, the immediate work affected by the change may not be subject to weather conditions but may delay other parts of the work that are thereby pushed into winter.

It is also sometimes necessary to accelerate the work of the project to catch up with the delays caused by change orders, especially if the contract disallows schedule extensions. Accelerations are another type of impact that affect the contractor's costs. Shift work, overtime, increased manpower and supervision, more construction equipment, and additional time to train new workers may be required.

The most deceiving part of change orders is their appearance to be profitable: all direct costs are covered, and overhead and profit margins seem satisfactory. Viewed in isolation, change orders may appear to be acceptable. The contractor seldom looks at the impact they have on other work in progress, including previously issued change orders.



## Construction Delay Claims



Typical Construction Schedule for Electrical Work

**Figure 1-1**

**Notes:**

The shaded areas represent the required time for each task. Vertical lines indicate task dependencies on previous task(s). Dotted lines represent float, also known as slack, because the tasks connected with them can be "floated", or performed, along these lines without affecting the critical path. Heavy lines plus shaded areas, or partial shaded areas, without float represent the critical path, i.e., tasks along this path are critical because they cannot be delayed without delaying the completion date of the project. Tasks 1, 2, 5, 8, 10, and 12 are critical. Task 8 and part of task 9, and task 10 and part of task 9, form parallel critical paths, i.e., these critical tasks are performed concurrently.

Impact costs involve mostly lost productivity, additional overheads, interest charges, and return on investment, which are treated in more detail in Chapters 2 and 3, but these costs can also include labor and material escalations and extended guarantees.

## **CHAPTER 1 REVIEW**

Some disruptions and delays on construction projects can be expected, and it is up to the contractor to anticipate as many as possible and to make allowances in his tender. Potential disruptions and delays ignored by the contractor at the tendering stage could later be regarded as one of his shortcomings.

A labor estimate is usually adjusted for abnormal conditions, including expected disruptions and delays, by applying job factors. However, if a contractor is aware of circumstances that might seriously affect the construction schedule of the project, it may be advisable to let the owner know through a tender qualification, even at the risk of losing the contract. Another advisable practice is to include a preliminary schedule with the tender. This schedule establishes the contractor's intentions at the outset, which helps resolve future disputes.

One of the causes of disruptions and delays are contract changes, which usually impact all work in progress, including previous contract changes. Furthermore, a contractor's work in progress is also impacted by some contract changes by other contractors. The expected costs for these impacts must be included in quotes for contract changes (or quotation qualifications to supply them later). The value of change orders that exclude costs for impacts should never be overrated.

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