



## SCHOOL CONSTRUCTION - WHAT SCHOOL OFFICIALS NEED TO KNOW

By Frank Manzo  
Principal

### *What can cause delays and increased costs on a school construction project?*

Many factors can lead to delays and increased costs. Some are beyond the control of the parties such as unforeseen site conditions, the presence of previously unknown contaminated or hazardous materials or unusual weather conditions. Others are within the control of the parties and are usually the result of incomplete planning and deficiencies or conflicts in the contract documents. This article is the first in a series designed to inform school officials of the nature of the construction process and how to avoid the typical problems that can be encountered.

Construction of new school facilities, or the expansion or alteration of existing facilities is not an activity that school districts deal with on a frequent basis. The need for careful planning is certainly recognized, but since the process involves tasks and activities that are unfamiliar to educators, consultants must be utilized. The first consultant that may come to mind is the need to select the architect. What should be considered - even before the architect is hired, is the selection of a construction consultant to assist in the **scheduling** and planning process.

The easiest date to define in the schedule is the end date. School officials usually know when the new facility will be needed. Everything works backward from the end date. If the architect is not identified and hired in a timely manner, insufficient time may be allocated for the preparation of the plans or for the construction of the project, or both. Potentially, this can cause mistakes or omissions in the contract documents that can lead to increased costs and delays during construction, or to higher bids due to the shortened construction period or to claims for accelerating the schedule or to late delivery of the finished product.



Construction consultants have many names and you may be familiar with *construction managers, project managers, program managers, owner's representatives and clerk-of-the-works*. Regardless of the name, the important point here is to define the *service* that is needed. That service is to integrate the educational and programmatic activities with the funding, contract development and procurement tasks that are necessary elements of the process. The identification of all the tasks and activities, the identification of the responsible participants and the allocation of periods of time for the accomplishment of the tasks is the service provided by the construction consultant. The work product in this initial phase is a **schedule** for the entire project, not just the construction phase.

A critical item in the planning process is funding. School districts typically raise money through bond issues. This is a lengthy process that requires coordination and communication with attorneys, underwriters and the general public. Contracts cannot be let unless the bond issue has been approved and the funds are available for disbursement. The nature of public procurement is to award the work to the lowest **responsive and responsible** bidder. In order to be competitive, contractors estimate the costs as accurately as possible and, unless notified of unusual constraints, anticipate starting the work as soon as possible (usually in less than 30 days after the bid) and completing the work as quickly as possible. Horror stories aside, the only way contractors make their money on a construction project is to complete the work in as short a period of time as possible. If there is any delay in awarding the work because the funding is not in place, the contractor's costs may increase, leading to a claim for additional compensation.

As an example, throughout this series of articles, we will track the progress of a hypothetical project and illustrate situations that can lead to delays and increased costs. Where appropriate, we will indicate appropriate actions that could have been taken to avoid or mitigate the costs.

A new \$30 million high school project was anticipated to take 17 months to construct. Final completion of the project was to be on August 15, 1997. The bids were due in mid February 1996. This date was considered to allow for a routine 30-day period for the bid evaluation, award and notice to the contractor to proceed with the work. In fact, the owner's proposed schedule



anticipated a March 15<sup>th</sup> Notice to Proceed. The apparent low bidder considered the 17-month performance period to be aggressive but hoped to get a good start by mid March 1996 and have the new building “closed-in” before winter.

The School Board’s Bid form contained a requirement that the contractor guarantee the bid for a period of 60 days. Because the funding was not in place at the time of the bid, the Board, on advice of their attorney, was unwilling to award the contract. It became apparent that the bond issue would be approved, but not before the bid expiration. Not wishing to lose a low bid that was over one million dollars lower than the next bid, the Board awarded the contract on the last day, April 15<sup>th</sup>, but did not issue the notice to proceed until June 15<sup>th</sup>. The contract completion date was extended to November 15, 1998.

Contractually, the School Board was within the provisions of the procurement regulations and contract provisions in awarding the contract within 60 days. However, the potential for a delay claim has been created. The request for bids did not address the time from the award of the contract to the notice to proceed (although the schedule reflected a period of approximately 30 days from the bid date to the Notice to Proceed). The additional 60-day period to issue the Notice to Proceed constituted a potential delay. Furthermore, the delay meant that additional costs would be incurred because the new building would not be ready by the start of classes.

Equally significant, the delay precluded the closing-in of the building before winter. This shift from a period of good weather to bad weather conditions would lead to a claim from the contractor for increased costs due to weather related inefficiencies, the need for temporary heat and disruption of planned construction sequences.

The construction of schools, like all other construction, is a complex process that requires careful planning. The actual brick and mortar work is the last part of the process, but the one that is least flexible in accommodating changes. Since the procurement of school construction is subject to strict rules, including the awarding of the work to the lowest responsible and responsive bidder, there is little margin in the contractor’s price for the **risk** of such events. In public bidding, the opportunity to offer prices based on work other than that that is depicted simply does not exist. Hence, contractors will bid on precisely the scope and level of quality shown and/or specified. In order to compete, contractors figure only that



which is shown and do not include contingencies unless the **allocation of risk** requires that they protect their interests.

One element of risk is the time allocated for performance versus the potential damages that could be incurred; these are the **liquidated damages**, for failure to complete the work on time. An unreasonable performance period will force contractors to allow for the **risk** by either including the cost of accelerating the construction by the use of overtime and extra crews or by including in the bid the value of the potential liquidated damages. Either way, the school district winds up paying more due to the lack of planning and **schedule management**.

The risk that the contractor assumes on this type of contract is that the performance time will be extended with an associated increase in costs. If additional time is due to the contractor's actions he or she must absorb the costs. If, however, the owner causes the delay, the contractor will seek to recover the increased costs. In the above example, the owner may be responsible for the delay in starting the work thereby entitling the contractor to recover the costs.

What could have been done to avoid this situation? The preparation of a **critical path schedule (CPM)** at the beginning of the process would have identified the funding dates with a reserve (float) for unanticipated delays. Upon realization that a delay would jeopardize the commencement of construction, negotiations could have been initiated with the apparent low bidder to mitigate the costs of the delay. Faced with the potential loss of the contract, the low bidder would have an incentive to minimize the impact of the additional costs to the owner. For contractors seeking public works contracts, the work is difficult to win and it is possible that the contractor would assume some of the risk of increased costs in order to preserve the contract.

In the absence of any action to minimize the potential claim, the contractor may reserve its rights to submit a claim at a later date and diligently keep records of the unanticipated increased costs attributable to the delay. In addition to the contractor's claim, the school district will be faced with the expenses of defending the claim and in the extreme, litigation costs if the issue cannot be resolved.