



Cost Containment

Staying on budget and containing the costs of a construction or modernization project is a critical goal for any school district embarking on building or renovating a school site. The decisions involved in school construction have long-lasting implications and board members need to know the types of questions to ask in order to ensure that they are making the most effective decisions to benefit the students in their district. Engaging the community, gathering input, and setting the appropriate expectations up front about the scope of the project can also be critical actions in containing costs.

In an effort to minimize cost overruns, board members will want to ensure that important considerations are factored into the planning, design, and building processes of school construction and modernization projects. By thinking ahead, anticipating potential problems, and defining processes in advance of issues arising, districts can take steps to contain costs. By considering the best practices and strategies that can keep costs down and by avoiding some key issues and processes that inflate the cost of construction, districts can do their best to stay within budget.

This document is designed to give school board members an overview of the types of questions to raise with staff and consultants. Some of the areas that can most impact the cost of a project include an estimating timeline, having appropriate plans in place, doing careful budgeting and cost estimating, ensuring that there are processes for communicating decisions and changes, and other issues that can impact the cost of a project.

Budgeting/Cost Estimating

It is recommended that part of the budgeting process include cost estimating in phases, revising the numbers at different points of the planning and construction process. These estimates will likely require input from multiple sources: district financial staff, the project architect, construction managers, facilities managers, and perhaps outside professional costs estimation consultants. A district may also want to consider building contingency funding into the construction or modernization budget, explicitly including potential change orders as

cost in the project budget, typically somewhere from 1 percent to 5 percent of the project budget, depending upon the size and complexity of the project.

The first estimates should be built into the Facilities Master Planning process. The Facilities Master Plan should include:

- Educational specifications
- Enrollment projections
- Community needs
- Project timeline/schedule
- Site selection information
- Delivery method options
- Project budget

See the CSBA Construction Management Policy Brief on Facilities Master Planning for more detailed information. As part of the Facilities Master Plan, in order to set standards that will keep construction and modernization costs in line, a board may also wish to create a single standard for all sites, instead of thinking about each site as an individual project. Such a framework could be a way for the district to achieve the goal to finish all modernization projects, at all sites, while keeping down costs.

Secondly, during site identification and project design planning, the estimates should be revised to ensure that they reflect the desired educational specifications, specialized areas to be built, and accurate student enrollment projections. As part of the process of validating the project's estimated budget, it should be remembered that any increase in one part of the budget has to be offset by a decrease in another area.

- Are construction plans, drawings and specifications as accurate and complete as possible?
- One point to consider at this phase is whether the initial cost of construction been weighed against the long-term maintenance costs. Will decisions to reduce costs at the

front end contribute to long-term spending to operate the facility on the back end?

- Could uniform parts such as windows, paint colors, and flooring be used throughout the site and throughout the district?
- Do the cost estimates take into account the costs of the land, access, utilities, and foundation design in addition to the construction costs to develop the site?
- Do the plans include cost estimates for details such as architectural features, landscaping, flooring, technology, roofing, electrical, phone systems, hardware, etc.?
- Are the estimates and bids for the project recent? Have the costs for materials and labor increased between the time the proposals were made and the decisions are being considered?
- Does the budget include an appropriate estimate of the time it may take to obtain state agency approval for the project?
- Does the budget take into account any potential changes in the economy that could impact cost?
- Do the plans for the site and the size of the building accurately reflect the student capacity, desired curriculum options, and scheduling opportunities expressed in the Facilities Master Plan?
- Is reusing an existing plan an option? Are there prototype elements from other sites that can be duplicated at this site? Reused plans can sometimes streamline application process with the DSA and OPSC. It can also enable the district to more accurately project construction costs because architect fees should be reduced and contractors already have a familiarity with the project details, have an established history with the design, and know where potential overruns may occur.

The next estimate should occur about 25% into the construction of the project – ensuring that detailed costs such as the square yards of carpet required, number of light fixtures, and components of the HVAC system are accurately accounted for in the budget. This is the time to assess the budget and make trade-offs, if necessary, to ensure that costs are contained.

- Is there an opportunity to use interchangeable fixtures or uniform paint colors/flooring types to make repair and replacement easier and control costs?
- Does it make sense to limit the bid specs for a particular project? A district must weigh the potential savings from using uniform features with the potential higher costs of utilizing proprietary specifications, which could limit the number of potential bidders, because requirements are narrowly focused. For example, if a district wants to install the same fire alarm system in a new site to that is used in existing buildings, the

number of bids could be limited if there only a few contractors who support and service this system.

- Is there a process to keep control of change orders in a methodical and timely way? Board vigilance on approving change orders is a critical piece of controlling costs.

Finally, near the end of the construction project, when about 95% of the work is complete, another look should be taken of the estimates to make minor adjustments (but not major changes) to provide flexibility in areas such as flooring and fixtures.

- Have “bid alternatives” been identified? For example, could the district defer a decision on the quality of the materials to be used for countertops only after the budget estimates have been validated, after most of the work has been completed and budget estimates validated?
- Have credits been requested where change orders have been deducted or not required?

Other Aspects of Planning

By adequately planning, with a thorough review process, districts can work to minimize the number of change orders that add to the final cost of a construction project. Change orders are typically driven by three reasons: a policy decision by the board resulting in a change request, an architectural feature, and because of unforeseen conditions. Some other factors to consider, beyond design and site selection that can affect cost:

- Is there an opportunity to collaborate with a developer?
- Is there an opportunity to bank land? How certain are demographic projections?
- Is there a project tracking system in place?
- Is there sufficient capacity to work on multiple projects? For many districts, it may be advisable to start no more than one or two modernization projects at a time, because of the potential for unforeseen conditions. For example, once a project begins, it may be discovered that assumptions may not be accurate, such as a structural support that was assumed to be in place not existing, or discovering that walls are insulated with asbestos.
- Have the references/background/history of contractors and architects been thoroughly checked?
- Is the scope of the project well defined? Are the bid specifications of the project appropriately defined?

Staffing the Project

In some districts, construction and modernization projects may be infrequent, and therefore the internal staff capacity for handling such projects may be limited, both in terms of available staff resources and familiarity with project delivery methods. Other staffing factors that can impact costs include:



- Does your district have adequate staff capacity to manage the project for the entire proposed timeline?
- Does district staff have experience with projects of this level of complexity?
- Does district staff have an appropriate understanding of how to pace modernization projects, based on the overall pool of money available?
- Could hiring outside professional consultants save the district money in the long run? Consultants with experience in school facilities, educational planning, design, and facilities needs may benefit the district, including:
 - Demographic consultants
 - Architects
 - Construction managers
 - Engineers
 - Site surveyors
 - Geotechnical engineers
 - Environmental consultants
 - Energy consultants
 - Traffic engineers
 - Real estate attorneys
 - Financial consultants
 - Bond consultants
 - Developer fee consultants
 - Appraisers
 - Construction testing engineers
 - Construction inspectors
- Have consultants been carefully selected? Do consulting contracts include a complete scope of services, time and fee in the contract language?
- Is it clear to members that modernization funds are different from construction funds?
- Have progress reports to the board and citizen oversight committees on the construction process and milestones been made a part of agendas?
- Have discussions and decisions been documented so that they can be clearly communicated back out?
- Is a plan in place to keep the community informed?
- Is there a shared understanding of the budget and shared expectations of what elements will be a part of the final project?

In any project, there are likely to be unforeseen circumstances that arise and will cause the initial plans to be modified. However, through careful planning, conscientious estimating, and well-defined processes to make adjustments during the project, there are multiple opportunities for a district to contain costs.

Communications

Ensuring that stakeholders have access to information and understand decisions being made can help to prevent issues from arising after the fact. Therefore, it is important to have a process for communications about construction and modernization projects in place.

- Is there a Proposition 39 Citizens Oversight Committee in place? Have the members been trained? Do they understand their role to look for waste, identify issues that arise, review change orders, and ensure that funds are spent appropriately?

Resources

Best Practices Report: A sampling of best practices and resources of school facility construction. Office of Public School Construction. March 2003.

Public School Construction Cost Reduction Guidelines. State Allocation Board. April 2000.

An Exercise in Déjà vu. David Silva. California Construction. August 2006.

Building Within Budget. Kelley D. Carey. American School Boards Journal. 2000.

Keeping the Roof on Building Costs. James E. Rydeen. School Administrator. June 1994.

California Coalition for Adequate School Housing. Cost Containment Cookbook For Public School Construction. January 2000.

Up, Up and Away! Dealing with Cost Escalations in School Construction. California Coalition for Adequate School Housing Conference on School Facilities. February 2007. Julie Arthur, Brian Cahill, Ed Mierau, Julius Conway, Len Metcalf.

Tips for Containing Costs on School Construction Projects. Rich Henry. CASH Register. April 2003.

The California School Boards Association's Construction Management Task Force provides districts with policy briefs and fact sheets on construction related issues. District staff and Governing Boards should use this information as a resource when making local decisions. These documents are provided for informational purposes only and are not a substitute for legal advice from school districts legal counsel. Districts should obtain independent legal advice and review when necessary.

If you have any questions, please contact CSBA Policy Services at (800) 266-3382 or via e-mail policy@csba.org

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