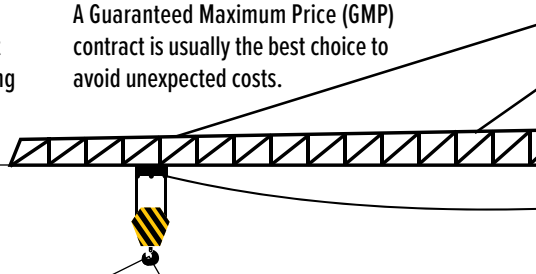
the bottom line

Developing a campus plan before going into construction will optimize spending and timeline, and help with fundraising and strategy.

A tight central planning team is better able to focus on all relevant details and total costs while making more strategic decisions.

A Guaranteed Maximum Price (GMP) contract is usually the best choice to avoid unexpected costs.



CONTROLLING CONSTRUCTION COSTS

As costs for materials and labor rise, school leaders are turning to planning, partnerships and contract management to deliver projects on time and on budget.

BY STACEY FREED

When Eric Norman, vice president and CFO of Thomas College in Waterville, Maine, was CFO at Tower Hill School in Wilmington, Delaware, the school "basically went on a six-year construction spree," he said. The school's centennial campaign in 2019 set the stage for $35-40 million in construction projects. "It really remade the campus [and] helped enrollment dramatically." Facilities are a real draw, Norman explained, particularly in markets like Tower Hill's, where demographics are unfavorable to independent schools.

Beyond the pull of enrollment, many schools have the perennial push of aging facilities and deferred maintenance issues that they must address on tight budgets.

Long after the COVID pandemic subsided, hangovers in material lead times, escalated labor and other construction costs remain. "The pandemic was disruptive to the entire system, but while other parts of the economy recovered their normalcy, I think construction was changed for the long run in ways that are difficult for owners to navigate," said Bill Auerswald, chief financial officer and chief operating office at Greenwich Country Day School in Connecticut, who has spent the last 12 years in constant construction mode.

More recently, U.S.-imposed tariffs on foreign goods have raised material prices while wars in Ukraine and, most recently, the Middle East, have led to shipping delays and higher oil and gas prices.

To complete construction projects on time and on budget, which ultimately keeps costs down, schools need to focus on strategic planning, smart partnerships and disciplined project management.

Control the Campus Plan

To keep construction costs in check, **school leaders should understand "the totality of your assets first before going into any kind of construction activity**," said Pete Zuraw, vice president market strategy and development at Gordian, a facilities consultancy. "It's important [to avoid] reacting to the latest urgent or spontaneous need [and instead] really think and be planful about your choices."

NBOA Resources on Campus Planning

Facilities Planning & Maintenance Toolkit (articles, webinars, samples)

Durable Campus Planning: Aligning Vision with Strategic Purpose (webinar)

Building on Culture: Interpretive Campus Planning (article)

A comprehensive campus plan will help. The first thing Norman did when he got to Tower Hill was to create a campus plan, which the school had never done. "It helped in several ways: It supported our capital campaign and strategic plan; gave us a good idea of what buildings we really needed to renovate or replace; helped us sequence and stage projects; gave us a roadmap for fundraising and development; and allowed us to start talking to banks about financing."

Having the plan means that as a building goes up, you know what else is on the horizon, said Michael Hoyle, chief financial and operations officer at Middlesex School in Concord, Massachusetts, and that can help you offset costs. For example, "If you're running fiber, or putting in a new water line, or irrigation components, or doing geothermal, you can think about what's going to be happening around it. If you're already in the ground, maybe you lay some additional conduit and stop … because you're going to connect to it later on."

The campus plan should also include information on post-construction maintenance and operations, including labor. "Ideally, schools should raise an extra 20% on top of your project cost to set aside for your PPRRSM reserve [Provision for Plant Replacement, Renewal, and Special Maintenance]," said Russ Friedson, assistant head of school for finance and operations at Sidwell Friends in Washington, D.C. "The reality is that most schools are unable to do that. The best operating practice — which we follow — is to fund 100% of [y]our depreciation into a PPRRSM reserve." That's even for new buildings, Friedson stressed, since you'll be ready when the time comes to replace things. "Depreciation is not a non-cash expense; it's a deferred cash expense."

Keep in mind, Friedson said, a campus plan, "while aspirational, needs to be grounded in reality. It doesn't help to build a campus plan beyond the institution's capacity; however, if it's not aspirational enough, and you have the ability to do more, that's not

NBOA Resources on PPRRSM and Facilities Funding

Positive Change in PPRRSM (article)

PPRRSM Guidelines Sample (document)

Is Your School's Working Capital Working? (article)

All In: Total Cost of Ownership at Independent Schools (article)

NBOA Financial Dashboard for Independent Schools (tool in BIIS data platform)



Photo courtesy of Tower Hill School.

good either. It's about getting the right fit — which is really the foundational point to controlling costs." He recommends finding an architect with experience in campus planning.

Reuse on the Rise

One way to keep costs down is to repurpose or adapt old or underutilized spaces instead of building new.

Casey Smith, AIA, a principal in the Education Studio at Hord Coplan Macht in Baltimore, said he has recently seen "a growing propensity for reuse" among schools exploring campus improvements. "Renovation can often be a more cost-effective way to transform part of a campus when you look at the simple cost per square foot," said Smith, who has completed nearly 60 campus master plans with school clients across the country. "In many cases, renovation projects fall in the range of roughly $200–$250 per square foot, compared with $500–$600 per square foot for new construction. **That can make renovation roughly 50% less expensive, depending on the region.**"

However, Smith cautions that renovation is not always a straightforward decision. Unknown conditions hidden within older construction can introduce complexity. Once walls are opened, teams may discover outdated infrastructure or structural challenges that require additional work, which can affect both cost and schedule.



Photo courtesy of Greenwich Country Day.

Finding Vendors with School Experience

There's no sense in spending money on a large firm if they've never done a K-12 project. "You want to work with people who understand schools and what's important to your program," said Russ Friedson of Sidwell Friends. "The more your business matters to someone, the more they'll care, the more attention and effort you'll get. You don't want a firm that's so small it can't meet your needs or so large your school doesn't register."

You can audition a firm. At Sidwell, Friedson said, they first worked with a firm on a series of smaller projects — standard repairs, maintenance, small renovations — before moving into larger scale work, after they proved they were responsive to the school's needs.

NBOA's **Business Partner Directory**, available exclusively to NBOA member schools, includes firms with independent school experience. **NBOA Connect** online forum is a place to look for and ask for recommendations.

You don't want a firm that's so small it can't meet your needs or so large your school doesn't register.

Russ Friedson
Sidwell Friends

Local regulations can also play a role. Certain jurisdictions require upgrades when substantial renovations occur. School Construction News has reported that in some areas even modest renovations can trigger requirements such as seismic improvements or other code updates, adding cost to the project.

Construction logistics are another factor. Renovations often take place in buildings that remain partially occupied, which can require phased construction and careful scheduling. "**When work has to happen incrementally to accommodate students, faculty, or residents, it can increase the contractor's general conditions and ultimately affect the overall project cost,**" Smith noted.

Even with those considerations, renovation can be a highly effective strategy when underutilized space has strong structural "bones," the buildings remain in good condition, and the location and layout already support the school's long-term needs.

More on Operational Innovation at Tower Hill

Time for Cloud 9: Automating the Business Office (article)

School Culture and the Cloud: Hybrid and Remote Work (article)

Remission Accomplished? (article)

Norman said that at Tower Hill about 90% of what they did was renovation of existing space, maximizing floor plans rather than building new. "We repurposed an awful lot of things that were underutilized — whether it was a library, dining commons, courtyard or an old gym. Suddenly we went to a much higher utility platform for less cost."

According to Smith, new construction becomes the more strategic investment when an existing building cannot effectively support a new programmatic use or when



Photo courtesy of Tower Hill School.

Systems-Built for Savings

Offsite construction can be a faster, more predictable path for many projects.

For independent schools facing tight budgets and compressed timelines, modular and system-built construction offers a compelling alternative to traditional on-site stick-building. David Dillman, director of sales at Design Build Modular Homes and Westchester Modular Homes of Fairfield County in Massachusetts, has spent 25 years working with schools on projects ranging from preschools to dormitories and staff housing.

"The way to think of what we do is we stick-build in a climate-controlled environment. It just happens to come in pieces," Dillman said. "The nice part is that in the factory setting, it never rains, it never snows. We have constant quality control." While Dillman's company works through the entire building process from design to manufacturing the modules — which arrive onsite complete with electric, plumbing, flooring, windows and doors — to readying the foundation, other companies may not.

The approach delivers significant time savings. An eight-unit staff housing project, for example, could be completed in the six- to nine-month range upon obtaining a permit, said Dillman. One recent school project involving three buildings for faculty housing with high-end finishes took less than a year to complete, Dillman reported. The school saved about 10% in costs compared to a traditional on-site stick-built project, and about 12-18 months in time.

Cost predictability is another major advantage. "A school's exposure really lies in the site work. From the top of the foundation up, it's very predictable, so it makes it much easier for schools and universities to budget," Dillman said.

Factory efficiencies translate directly to savings: "We essentially buy futures for materials. We're ordering materials 12 weeks out from when we're setting the building, so we control pricing much better."

Schools also benefit from reduced campus disruption. In Dillman's words: "The other fringe benefit for institutions is it's less invasive on their campuses because we get the foundation in, bring in the modular units, set them, and we're done much faster."

Residential project by Design Build Modular Homes.

additional square footage is required to align with evolving campus needs. "Some buildings simply lack the layout, structural capacity, or infrastructure needed to accommodate contemporary educational programs," he said.

In addition, **if a building has eroded more than 50% of its replacement cost, it may be time to build new,** said Zuraw, whose firm produces a facilities condition index or a net asset value figure that schools can use to measure the value of a single building or across an entire building portfolio. Though sometimes, as he points out, there's an emotional connection involved in saving an old building even if building new would be more cost effective. "It may be precious because of its history, or it has some role in the life of the institution."



Orchestrating Opinions

No one goes it alone on a school building project. Friedson suggests having a core steering committee for the planning phase, which includes a director of facilities, the CFO/business officer and the head of school. "Depending on the size and structure of the school you may or may not have a trustee on the steering committee," Friedson said. You'll also need the head of security and the head of technology involved early on.

Zuraw notes that some institutions bring students into the process and perhaps people from the community, if there are regulatory issues. Auerswald said to be cautious when inviting teachers into the process. "They should be at the table but there is a risk if their desires are very specific because some of those faculty move on, and new faculty replacing them may want different things," he advised.

As you move into the design process, you need to include your architect, general contractor and your owner's representative, if you've chosen to have one. **A tight team will help keep costs down for several reasons.** One, as Friedson said, is that the whole team can focus on details and cost, which "creates a mindset where people recognize that cost can't be ignored." He advises the facilities director and top business leaders participate in a construction meeting with the construction team at least once a week. "You can't just hand things off to the construction company, architects and the owner's rep and wait for a building," he said. If you do, expect costs to rise and vision to shift.

Having an owner's rep — someone who acts on your behalf, helping to mitigate costs and oversee a project — is not a requirement but is in your best interest. "We tried to go without one on our gymnasium project," Auerswald said. "It turned out to be a mistake." The project, a teardown of one footprint to be replaced by a pre-engineered metal building got more complex than expected, in terms of the demolition, ground conditions and attachment to an existing building. A rep would have helped "navigate the change orders and extra work required from the engineers, site contractors and construction manager."

Order Materials Early

Much of your costs are locked in during your design phase. The more specific you can be when it comes to materials and the earlier you can specify your needs, the better off you'll be on budget and cost, particularly in the current economic climate.

"Lead times have generally gotten back to pre-pandemic levels, but it's different for different materials," Smith said. Here's his estimate of lead times:

- **Mechanical equipment and air handlers:** 14- to 16-weeks lead time, standard from before the pandemic, regardless of location.
- **Electrical gear** (main service panels, switch gear, big main electrical coordinates): around 24 weeks due to increased demand with the electrification of buildings.
- **Lumber:** generally stable, unchanged and unimpacted by tariffs, as the U.S. has a strong supply.
- **Steel:** imports have faced tariffs.

Editor's note: As of this writing, the war in the Middle East is in early stages. There will be downstream effects of oil and gas shortages that haven't yet come to fruition. Hundreds of products are made from petroleum (oil and gas).

In addition, beware the "summer blitz" when it comes to schools and construction, Smith said. "To hit the critical path, we need to order electrical gear six months in advance [while still in the planning stage] so it arrives in summer." Firms used to order "gear" after design was complete, but that delays timelines too much. Bottom line: plan and order materials early.

Photo courtesy of Middlesex School.





Photo courtesy of Tower Hill School.

Contract Considerations

Different types of contracts can shape the work with your construction team — lump sum, design-bid-build, GMP. School leaders interviewed for this article prefer the latter, **Guaranteed Maximum Price or GMP.** "I prefer this because as the owner, you really get a window into the selection of who the subcontractors are [and their pricing]. Whereas with lump sum and the others, you're flying blind," Hoyle said. With GMP you can put clauses into your contract with the GC about meeting deadlines or financial targets. You can stipulate that if the GC is under budget, you get to share in a percentage of the savings.

Hoyle, who began his job at Middlesex in July 2025, inherited a $37 million field house project, which should be completed mid-June 2026. The school negotiated a lump sum contract, signing up for a specific dollar amount to get the building done. "The GC selected the subs. We don't have any window into which other subs bid on it or what the nature of the contract is between the GC and the subs. That's what I mean about flying blind."

In addition, when Middlesex signed the contract, there were no milestones or metrics other than the completion date. "There's no incentive or penalty in there," Hoyle said. **Schools leaders can add a penalty or surcharge for every day or week the project lingers beyond the agreed-upon date.** "That's another way to get the GC to work closely with the subs to make sure people are staying on time."

When you're "flying blind" you're likely to have change orders, which will cost 20% to 30% more than if they had been part of the original bid. Change orders have added a significant amount to Middlesex's $37 million price tag for a variety of reasons. These include municipality requirements, the school's changes in plans, and the construction team finding a better way to proceed than the original plans dictated, Hoyle said.

Ultimately, "the better your upfront planning, the lower your overall project costs — from change orders and from reducing risk premiums," Friedson said. "When the plans are thorough and detailed, there's less uncertainty for bidders to price in." N

NBOA Resources on Construction Management

Foundations for Construction Success: Contracts and Legal Considerations (article)

Overcoming Rising Construction Costs and Delays (webinar)

Who's Watching the Money? A Construction Management Story (webinar)

Defining Roles and Responsibilities for a Successful Construction Project (webinar)

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