

Older and Historic Schools: Restoration vs. Replacement and the Role of a Feasibility Study



Introduction

Weighing the pros and cons of renovating an older school or building a new one takes preservation “know-how,” experience and creativity. Prevailing assumptions—that a newer school will result in a better education or misperceptions that older school buildings have unfixable flaws—place these schools at risk. The potential for renovation is sometimes dismissed without full consideration of the facts and long-term implications.

Central to this decision-making process is the feasibility study, often conducted by an architectural consultant hired by a school district. A feasibility study of the issues involved in renovation is the only tested way to evaluate the fit of an old building for contemporary educational uses. In its most basic form, a feasibility study helps establish if renovation of a historic school is possible, practical and whether it can meet the proposed educational needs. Not simply a cost-benefit analysis, a feasibility study evaluates technology needs and barriers, scheduling to complete a school construction project from start to finish, options and alternatives, and potential implications of decisions to the surrounding neighborhood and community.

Potential problems include studies being conducted by architects unfamiliar with renovation, inflated cost estimates for renovation, limited or no community input, a bias against historic, hidden costs not accounted for, and minimal consideration of community impacts.

A biased or incomplete feasibility study will not fully inform the general public or school district about all of their options. The checklist below can help identify the factors involved in making the best decision and assuring that a feasibility study is fair, objective and reasonable. It will also assist in identifying “warning signs,” questions to ask, and knowing what to look for when challenging the results and projected cost estimates of a feasibility study.

Consultants

More often than not, school districts hire architects and professionals who know a lot more about designing new buildings than renovating older ones. Not all architects have training, experience or an interest in the subspecialty of rehabilitation. Many architects are unfamiliar with, or sometimes even biased against, renovation options.

- Does the consulting architect have experience with renovation and/or specialize in older school renovations? If so, can you review previous work? If not, has the architect consulted with historic preservation agencies and/or specialists?
- Are there any inherent conflicts of interest? Is the consultant the likely architect for the new or rehabilitated school?
- How was the architect selected? Was it an open-bid process, request for proposals (RFP), or pre-selection?

- Is part of any funding assistance from the State and, if so, is there a review or approval process prior to selection of the architect?

Full Cost Accounting

In addition to the known costs for designing and constructing a new school, there may be other costs to the taxpayers that haven't been calculated. What are the full costs of building on a new site? Often these figures are omitted from the final cost estimate.

- If the new school will be built on an undeveloped site, there will be added costs to purchase and develop the land and to build roads, sewers and other infrastructure. Are these figures included in the study?
- What is the availability and cost of additional transportation to the new site (i.e. busing)? Will more children be bused to the new school? If so, what are the added costs? Does the centrally-located site offer more options (e.g., walking, biking, transit for upper grade students, etc.)?
- If the existing school is planned for demolition, there will be costs to demolish it, abate hazardous materials, and dispose of debris (often 4 to 5% of the overall replacement costs). Were these costs included in the final estimates?
- Renovating an existing building general saves 20 to 25% of the cost of new construction as the building shell is retained. Do cost estimates reflect this savings?
- If the school is already scheduled for abandonment, are costs to stabilize, maintain and upkeep, secure and dispose of the building included?
- What are the indirect costs to the community? How will a vacant, boarded-up school impact the surrounding neighborhood, influence marketability, stability and affect the area's property values? Has a Health Impact Assessment been conducted to see what the impacts will be on students? Have they computed the loss of recreational facilities to local residents (e.g., those who walk around the school's track, use ballfields, etc.)?
- If a school is proposed for a remote, outlying area, what are the additional costs of sprawl that usually follow, i.e. increased transportation costs, infrastructure (roads, sewer, sidewalks, etc.)?
- Do cost estimates for a building contingency (cushion) accurately reflect unknown or anticipated cost overruns for both rehabilitation and new construction?

Building Codes

Most existing and even recently built school buildings will not comply with every code provision at the local and state levels. Despite the flexibility of many codes and the potential for waivers, often studies rigidly interpret this compliance, declaring a building unsafe or cost prohibitive to retrofit.

- Did the feasibility study investigate and address code compliance options or alternate codes for older buildings in your jurisdiction, such as early warning systems?
- If seismic retrofit is applicable and proposed in the study, was an engineer familiar with older and historic buildings consulted?
- Can a new addition to an existing school preclude the need for a proposed demolition by meeting programmatic objectives and satisfying modern code requirements?
- Have important character defining and historic elements of the school been adversely impacted to satisfy code requirements? If so, were alternatives considered?

Public Participation and Community Planning

A study conducted behind closed doors does not consider all viewpoints or build trust and support from within the community.

- Were there public meetings or charrettes asking what the community wanted? If so, did they allow for community input? For example, were educational specification meetings held so that design professionals could create or update a facility that meets the community's needs?
- Was a citizens' or advisory committee formed to help explore the options and issues?
- Does the feasibility study consider the community use of the school, such as after-school programs or public meeting space?
- Are public meetings inclusive and involve those interested in broad community goals of health, transportation efficiency, and community vitality?
- Did the study consider a community's local planning program, zoning, comprehensive or master plan? Did the study take into account the state's concerns as outlined in their overall plan for the state's growth?
- Does the study take into account local or state goals of reducing carbon emissions and addressing climate change?
- Does the study address review or approval process at the state or federal levels?
- Were site visits made to other successfully rehabilitated schools? If so, did this involve a cross-representation of citizens?
- Who reviews the feasibility study results and what are their qualifications? Is anyone involved with an expertise or interest in preservation of communities?

Cultural and Historic Significance

Historic designation will often invoke environmental review requirements that help ensure alternatives to demolition are adequately considered. Conversely, designation could make the project eligible for alternative building code requirements and additional funding sources.

- What is the school's significance? Was this accurately reflected within the study?
- What is the cultural significance within the community?
- Does the study consider the implications of any local, state or national designation, such as any mandatory review process?
- Has a district-wide survey been done to assess the most important schools in the community? If so, was this information considered in the study?

Funding Considerations

The addition or omission of certain expenses may skew the analysis in favor of new construction. For example, the estimate for a new school might not include demolition or site development costs. An accurate and comprehensive cost comparison between renovation and new construction helps level the playing field.

- Does the funding source tie the feasibility study to any reviews or requirements?

- Is the study accurately considering life-cycle costs and forecasting future costs for both new construction and rehabilitation? Building components deteriorate at different levels and costs fluctuate year by year. A life-cycle analysis that uses a fixed rate of deterioration will lead to inaccurate results. What is the life expectancy of the new facility? What is the life expectancy of the renovated school?
- Are funding opportunities, such as matching-grants, associated with historic designation taken into consideration in the final cost estimate?
- Does the locality or state have arbitrary formulas mandating or recommending new construction as a certain threshold of spending? If so, is this indicated within the study? Did the study offer information about ways to obtain a waiver from the state if this is a requirement? State recommendations for size considerations are not the same as legal requirements.

Site Plan and Building

The abandonment of older or historic schools is often justified in terms of their incompatibility with modern educational specifications, such as minimum acreage and classroom size standards. More often than not, these specifications are merely guidelines that can be accommodated by adopting creative solutions. –

- Are proposed playing fields or new athletic guidelines influencing the decision? Are these requirements or preferences? Has shared use of athletic facilities (e.g., Parks and Recreation departments, etc.) been fully explored? Have multiple-use options been considered (e.g., middle school and high school share same ballfields?)
- Does the study consider creative partnerships with city park agencies, nearby churches, public transit agencies and other institutions to share playing fields, parking spaces, or transportation services?
- How will the new land be acquired? If donated by a developer, what are the implications and have the pros and cons and overall suitability of the site been considered in the study?
- Have local or state variances been considered, such as for expansive parking lots or acreage standards?
- Does the study account for the relocation of walls or use of hallway square footage to enlarge classrooms?
- Have spaces been considered for new uses, such as former libraries for media centers?
- Do you have first-hand information? Meaning is the information presented second-hand, and therefore potentially misunderstood or misrepresented?

Scheduling

Timing is another critical factor when considering any option. Can work be accomplished during the summer months, phased over several years or students housed in temporary quarters? These decisions often impact the viability of rehabilitating a school.

- Does the study outline logistics and potential for disruption to students for both rehabilitation and new construction?
- What is the total timetable proposed for all options, from start to finish?
- Does the study consider creative alternatives such as phasing work?
- Measuring building conditions can be a subjective process where older schools are often ranked as “poor” without any objective and quantifiable indicator of measure. An objective rating system and criteria that allow for comparisons between the subject school and others within the same district would be more reliable.

What criteria are used for the building conditions evaluation?

- Do they reflect age, type of construction, apparent condition and design adequacy, life expectancy, feasibility of renovation, mechanical adequacy?
- If school buildings were ranked by excellent, very good, good, fair, poor (or a similar system), does the study provide definitions for each?
- What are the credentials of the evaluator? Was the opinion of local administrators, teachers, and students taken into consideration?

Educational Programming

Standards for school facilities are set by the education agency of each state and vary from state to state. Local school districts also set standards. Sometimes these favor new construction over renovation.

- Are educational specifications influencing the outcome of the feasibility study and driving the decision to abandon the historic school? If so, do any state or federal guidelines mandate these or are they produced locally?
- Who wrote the program and does it have any inherent biases?
- What are requirements versus desirables? Must an elementary school be one-story or is that a preference?
- What is the current and projected enrollment for a school? Is overcrowding an issue and will a new school solve this problem?
- Can the older school be adapted to accommodate the needed educational programs? If not, does the study outline why and what sorts of spaces are needed.

Components of Feasibility Study

Before undertaking a study or hiring an architect, determining the scope of a feasibility study is a key step. As each school, community and region is unique, there is no one size fits all approach to conceiving a feasibility study. Instead, on a case-by-case basis, design the feasibility study to reflect your particular needs. A feasibility study has three parts:

- **Programmatic Fit by Schematic Analysis.** Using the same architectural program developed for a new school, a design professional explores ways in which the existing building can be modified to meet the educational needs of the curriculum. The work product is typically a schematic diagram of spaces and rooms overlaid to the current floor plan of the school, by which the extent of change necessary is self evident. Additions that do not fit within existing space are also shown.
- **Technical Conditions Assessment.** An architect and engineering team conducts a system by system analysis of the age, nature, and condition of each component of the existing school (and each episode of construction of that school) to identify systems with sufficient remaining useful life to warrant retention and continued use. The team then recommends which system will require replacement in whole or in part and which type of system is most appropriate to projected use.
- **Synthesis and Comparative Cost Estimates.** Based on the above two analyses, the design team then prepares an estimate of the cost of renovation and compares that to the cost of new construction from pre-established or published sources. Care must be taken in this cost summary to include even the hidden costs of both options.

Common Steps of a Feasibility Study

Document existing conditions of building(s) and site against proposed use and programming needs.

- Structural systems (including seismic, where applicable).
- Building envelope (windows, roof, gutters, etc.).
- Compliance with building codes.
- Plans and site (ADA accessibility/compliance, parking, transportation, etc.).
- Materials and finishes.
- Health and life safety (fire systems, lighting, alarm, egress, sprinklers).
- Hazardous materials (asbestos, lead paint, contaminated soil, etc.).
- HVAC, mechanical, electrical, plumbing.

Identify site-specific education specifications.

- Sq. ft. analysis for each component of the school.
- All classrooms (size, configuration).
- Support systems (office, conference, etc.).
- Gymnasium/auditorium (capacity, acoustics).
- Athletic/recreation needs.
- Cafeteria/"cafetorium."

Identify technology specifications.

- Whiteboards, TV, intercoms, telephone, internet access, network cabling.

Identify security specifications.

- Surveillance cameras, controlled/points of access.

Identify community needs/interest.

- Community outreach and public input.
- Role of school in adjacent area/community.
- Ability to walk or bike to school.

Evaluate cultural and historic significance/importance to community.

- Eligibility criteria.
- Local, state or national historic designation(s).
- Physical integrity.
- Period of significance for school.

Prepare physical feasibility drawings.

- Schematic or existing floor plans.
- Façade renderings.

Present full range of options/alternatives with pros and cons of each.

- Renovate?
- Renovate with additions?
- Replacement onsite with demolition?

- New construction on new site with abandonment?
- Adaptive use of an existing building for school use?

Define scheduling.

- Schedule of construction and timing for bringing school back online.
- Any phasing.
- Need to house students temporarily.

Present cost estimates and economic analysis.

- Broken down by each option (including initial cost, present value, operating cost, real estate value, and life cycle cost analysis).

Make recommendations.

- Quantifiable with rationale.

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About the National Trust for Historic Preservation

The National Trust for Historic Preservation works to put renovation of older and historic neighborhood schools on an equal footing with the construction of new schools as an option. We believe that preserving such schools offer numerous benefits to the community including the continued vitality of its older neighborhoods. The National Trust has developed resources to promote the continued use of older and historic schools over the past decade. This fact sheet cites information from various sources, including National Trust publications, *A Community Guide to Saving Older Schools*, and *Why Johnny Can't Walk to School: Neighborhood Schools in the Age of Sprawl*, and *Helping Johnny Walk to School: Policy Recommendations for Removing Barriers to Community-Centered Schools*. For more information, call 202-588-6167, e-mail policy@nthp.org, or visit <http://www.preservationnation.org/issues/historic-schools/>.

The National Trust for Historic Preservation (www.PreservationNation.org) is a non-profit membership organization bringing people together to protect, enhance and enjoy the places that matter to them. By saving the places where great moments from history—and the important moments of everyday life—took place, the National Trust for Historic Preservation helps revitalize neighborhoods and communities, spark economic development and promote environmental sustainability. With headquarters in Washington, DC, eight regional and field offices, 29 historic sites, and partner organizations in 50 states, territories, and the District of Columbia, the National Trust for Historic Preservation provides leadership, education, advocacy and resources to a national network of people, organizations and local communities committed to saving places, connecting us to our history and collectively shaping the future of America's stories.

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