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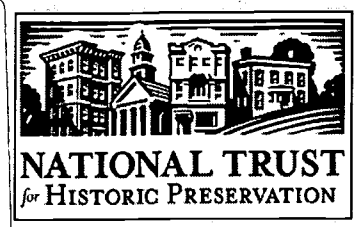
ABSTRACT

Weighing the pros and cons of renovating a historic neighborhood school or building a new one takes preservation "know-how," experience, and creativity. The potential for renovation is routinely 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 tocontemporary educational uses. In its most basic form, a feasibility study helpsestablish if renovation of a historic school is possible, practical, and whether it canmeet the proposed educational needs. Not simply a cost-benefit analysis, a feasibility study evaluates technology needs and barriers, scheduling to complete aschool construction project from start to finish, options and alternatives, andpotential implications of decisions to the surrounding neighborhood and community.The included feasibility study checklist can help identify the factors involved in making the best decision and assuring that a feasibility study for an historic neighborhood school 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. (EV)



HISTORIC SCHOOLS:
RENOVATION vs. REPLACEMENT & THE ROLE OF A FEASIBILITY STUDY

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Weighing the pros and cons of renovating a historic neighborhood school or building a new one takes preservation "know-how," experience and creativity. As school districts face the challenge of trying to satisfy educational programmatic requirements, the latest trends in teaching methods and integrating new technology, the historic neighborhood school is not always given full consideration. Prevailing assumptions that a newer school will result in a better education or perceptions that historic school buildings have unfixable flaws also place historic neighborhood schools at risk. The potential for renovation is routinely 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 to 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 persist including feasibility studies of historic schools conducted by inexperienced architects, inflated and exaggerated cost estimates for renovation, limited or no community input, a bias against historic, hidden costs not accounted for, and minimal consideration for impacts to a community.

A biased or incomplete feasibility study will not fully inform the general public or school district about all options. The below feasibility study checklist can help identify the factors involved in making the best decision and assuring that a feasibility study for your historic neighborhood school 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 historic rehabilitation. Many architects are unfamiliar with, or biased against, renovation options.*

- ☐ Does the consulting architect have experience with historic preservation and/or specialize in historic school renovations? If so, can you review previous work? If not, has the architect consulted with historic preservation specialists?
- ☐ Are there any inherent conflicts of interest? Is the consultant the likely architect for the new or rehabilitated school and do they have an interest in new construction?
- ☐ Can the architect be unbiased, fair and objective?
- ☐ 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 text available at:
http://www.nationaltrust.org/issues/schools/school_feasibility_study.pdf

Hidden Costs: *In addition to the known costs for designing and constructing a new school, there may be hidden costs that don't enter into discussions. What are the real costs of building on a new site? Often these figures are inadvertently or purposely 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 bussed to the new school? If so, what are the added costs?
- ❑ If the historic 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 historic 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?
- ❑ If a mega-school is proposed in remote, outlying areas, what are the costs of sprawl that usually follows, i.e. bussing, infrastructure, 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 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 historic buildings in your jurisdiction, such as early warning systems?
- ❑ If seismic retrofit is applicable and proposed in the study, was an engineer familiar with historic buildings consulted?
- ❑ Can a new addition to an historic 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: *The decision-making process associated with a feasibility study is not always open to the public or outside input. Citizens are more often than not excluded entirely and feel powerless. 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?
- ❑ 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 or instead dominated by corporations, developers, construction company owners, architects or others biased in favor of building a new school?
- ❑ Did the study consider a community's local planning program, zoning, comprehensive or master plan?
- ❑ Does the study consider any review or approval process at the state or federal levels?
- ❑ Were site visits made to other successfully rehabilitated historic 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 historic preservation?

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: *A feasibility study may add or omit certain expenses in order to skew the analysis in favor of new construction. For example, the estimate for a new school might leave out demolition or site development costs. An accurate and comprehensive cost comparison between renovation and new construction will help 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 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 new construction as a certain threshold of spending. If so, is this indicated within the study?

Site Plan and Building: *The abandonment of 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 – although school board officials -- are often under the impression that "standards" or "recommendations" are hard and fast "requirements."*

- ❑ Are proposed expansive playing fields, facilities and arbitrary athletic guidelines influencing the decision to build new? Are these requirements or preferences?
- ❑ 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 for use as a school 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 info. 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 an historic 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 historic 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?

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, often favoring new construction.*

- ❑ 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 local 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 historic school 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 historic 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 constriction 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.

Below is a general breakdown and 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

- ❑ 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

Evaluate 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?

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.

The National Trust for Historic Preservation's Historic Neighborhood Schools Initiative is aimed at leveling the playing field and putting renovation of historic neighborhood schools on an equal footing with construction of new schools. We believe that preserving historic neighborhood schools is of great importance not only to the historic preservation community, but also to advocates of better schools and better environments for school children. The National Trust has developed a multi-year strategic plan to promote the continued use of historic neighborhood school buildings as schools. 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 **www.nthp.org/main/abouttrust/schoolshome.html**

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