

Town of Abington School Feasibility Study

information & data
gathered as of August 26, 2013

Submitted to
Mass. School Building Authority
on 9/18/13
for review and comment

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***Why does the renovation and expansion of an EXISTING SCHOOL
sometimes cost about the SAME or MORE than the construction of a NEW SCHOOL ?***

1. BASIC FACTS: The current Abington High School building is 111,831 square feet in size. The Frolio Middle School, built in 1937, is simply too old and too costly to renovate. Abington's School Feasibility Study has investigated several potential building sites, reviewed 12 different school building and grade reconfigurations, and researched the regulations of the Massachusetts School Building Authority to determine how Abington could solve system-wide education needs with only one building project, while also maximizing the amount of state grant money to help pay for school construction costs. The Study has shown that the most cost-effective and viable construction site would be at or adjacent to the existing Abington High School building on Gliniewicz Way. The Abington School Building Committee (ASBC) is still reviewing the pros and cons of several new school building alternatives, including but not limited to a new stand-alone Middle School (Grades 5-8 or 6-8) adjacent to the existing High School; a new Middle School wing to be added onto the High School, with significant renovations and upgrades to the High School; a new "co-located" Middle & High School Building (Grades 5-12 or 6-12) next to the existing AHS building (which would thereafter be razed), and several other alternatives.

2. BUILDING AGES: As of 2013, Abington High School (1963) is 50 years old; Woodsdale School (1958) is 55 years old; Beaver Brook Elementary School (1952) is 61 years old; North School and Center School (1939) are both 74 years old; and the Frolio Middle School (1937) is 76 years old. According to data compiled by the Massachusetts School Building Authority (MSBA), with an average school building age of 65 years, ***the Town of Abington is currently believed to have the oldest school buildings in all of Southeastern Massachusetts.***

3. ONE NEW BUILDING MAY BENEFIT ALL GRADE LEVELS: Each new school building alternative will create different benefits and effects on Abington's other school buildings and grade levels. For example, combining Grades 5-12 on Gliniewicz Way would allow the town to move Grades 3 & 4 into the Woodsdale School, use the Beaver Brook School for K-2, and thereafter close the North, Center and Frolio Schools for school uses (the townspeople could later decide if those closed schools should be sold or re-used for other town purposes). If only Grades 6-12 are located at a school on Gliniewicz Way, Grades 4 & 5 would use the Woodsdale School, Grades 1-3 would be located at Beaver Brook, and the Center School would have to remain open to house Kindergarten and Pre-School. Documentation for all 12 different school layout and grade re-configuration plans are available for review from the ASBC. In order to qualify for MSBA state grant funding, Abington's final school building proposal must demonstrate that it will resolve the educational planning, programming and space needs for the town for the next 50 years, or the MSBA will reject the plan and provide no project funding to Abington. Based on the knowledge gained from previous school projects in many other towns, and based on the actual size of Abington's existing school buildings and projected grade populations, Abington's Feasibility Study suggests that converting the existing Grade 9-12 High School site into a school serving Grades 6-12 or Grades 5-12 would likely (a) maximize the funding from the MSBA, (b) result in renovated or new classrooms for more grade levels, and (c) address the overcrowding and classroom size issues in all of our school buildings. If the town and the state were to approve the construction of a "co-located" Middle & High School Building (Grades 5-12 or 6-12) on Gliniewicz Way, such a building would maintain a High School for Grades 9-12, with a separate and

designated wing for Grades 7 & 8 and another separate area for Grades 5 & 6 (or a combined Grades 6-8 wing). Much of the common spaces, such as a cafeteria, gymnasium space, auditorium, school library, and administrative offices would be constructed between the High School classrooms and the 5-8 classrooms. This general design layout would assure that the older and younger Grades would be physically separated from each other, but would also allow the various common spaces to be utilized by different age groups at different times. The shared use of gyms, cafeterias, etc. among several Grade levels in one consolidated “co-located” school building will also strengthen the Abington’s School Building Committee’s efforts to qualify for increased reimbursement from the Massachusetts School Building Authority (MSBA), thus lowering Abington’s share of the construction costs.

4. **MIDDLE SCHOOL CONSTRUCTION:** Addressing and correcting the problems created by the old age and old layout of our existing Frolio Middle School is our town’s first priority. The Frolio School building must be replaced. To provide sufficient classroom space for Grades 5-8 (a true middle school), together with improvements to centralized common spaces, would require the construction of approximately 145,000 square feet of new floor space. Therefore, based on square footage calculations, if Abington elected to renovate the existing Abington High School and constructed an attached new Middle School wing (instead of constructing an entirely new Grade 5-12 building), the majority of Abington’s school construction project would still constitute “new construction”. The same finding would hold true if the Grade 6-12 school building alternative was selected, except that any additional desired improvements for other grades levels at the Woodsdale or Beaver Brook or Center Schools would require the town and state to fund a second and separate school construction project a few years later. The MSBA will not fund two separate construction projects on two separate building sites at the same time; the MSBA grant program promotes and rewards the cost-efficiencies created by encouraging the design and construction of a single school building project which provides benefits to the town’s entire school system.
5. **HIGH SCHOOL OR FROLIO SCHOOL RENOVATION:** The Town is seeking reimbursement grant funding from the state (MSBA) in order to pay for approximately 55-60% of Abington’s eventual school construction project. To qualify for state grant funding, towns must insure that any school renovation work will address all of the physical needs of the school, while also addressing the educational needs of the town’s students. The MSBA sets minimum classroom sizes (and maximum sizes), must approve layout and configuration plans, and must confirm that the renovated spaces will actually serve the needs of the town for at least the next 50 years. Otherwise, no grant funding will be approved. Due to the age of Abington High School and the Frolio Middle School, the amount of renovation work which would be required under current law is extensive, and would constitute a “Comprehensive Renovation Project” at either site.
6. **COMPREHENSIVE RENOVATION PROJECT:** The renovation of commercial buildings and public buildings (such as schools) trigger much more extensive Code requirements than a typical home renovation project. State and federal laws, such as the Americans with Disabilities Act (ADA) regulations and fire safety regulations, require significantly more structural and mechanical upgrades for school renovation projects. A desire or need to change the layout of the Frolio School’s or the High School’s floor plan in order to meet current educational guidelines and standards would trigger a requirement to bring either or both of those school buildings within complete compliance with all

current Massachusetts Building Code regulations, all of the new State Energy Code requirements, all Massachusetts Architectural Access Board regulations (and federal ADA regulations), and all fire safety regulations. Once over 30% of the assessed value of a school building is renovated, state law then requires the ENTIRE building to be brought up to date with ALL applicable codes and regulations. In short, and as an example, the minimum renovations required to update either school building would require an upgrade or replacement of the entire roof, electrical wiring, plumbing and plumbing fixtures, the exterior building envelope and insulation, windows and doors, fire alarm and fire protection systems, interior stairways and doorways, elevators, all heating and air exchange systems, and building security systems. Obviously, to complete these upgrades, most every wall and ceiling in the building would have to be opened, removed and/or replaced – and somehow the building would have to remain partially functional and occupied for school purposes during these renovations.

7. **ACCESSIBILITY REQUIREMENTS:** Note that the “main floor” of Abington High School and the Frolio Middle School are actually constructed one half-story ABOVE the surrounding site grade. Presently, at the High School, after a visitor or student climbs up the five exterior granite steps at the main entrance, upon passing through the entrance doors, a visitor must then either go up or go down a flight of stairs to reach the main floor or the basement floor level. To conform with current accessibility laws, a renovation project at Abington High School would require major structural modifications to the building and perhaps its surrounding site so that visitors or students with disabilities could enter the building without encountering exterior or interior stairways. Similar structural modifications would be required at every exterior entrance door, and every classroom doorway, every counter height, every bookshelf, every elevator, and every bathroom; all of these building components would have to be reconstructed in order to comply with current ADA, Architectural Access Board (AAB) and Building Code guidelines. Alternative structural modifications which are intended to improve accessibility, but which do not provide 100% accessibility and full compliance with current regulations, would not be sufficient. A similar analysis holds true for the Frolio Middle School.
8. **NEW ENERGY CODE REQUIREMENTS:** The Commonwealth of Massachusetts has adopted an Energy Code which requires every building undergoing significant renovations to comply with a very high standard of energy efficiency. A renovation project at Abington High School and/or the Frolio Middle School would require the old boilers and heating system to be replaced, all lighting fixtures to be replaced, and the entire building envelope (walls, windows and roof) to be upgraded and reconstructed in order to comply with the recent changes to the state’s Energy Code. Both school buildings would essentially have to be stripped down “to its bones” and then be reconstructed in accordance with today’s Energy Code requirements.
9. **HIDDEN HAZARDS:** In any renovation project, there are unforeseen or “hidden” conditions which are discovered during the demolition phase of a project. These conditions generally result in additional expenditures, and the MSBA recommends that a “construction contingency” be added to project’s budget in order to cover these (unknown but anticipated) costs. Although a project budget for “new construction” also requires a construction contingency amount, the industry standard and MSBA recommendation for a renovation project includes significantly higher contingency costs (and thus a higher budget) in order to cover these unforeseen or hidden conditions. For example, although the Town and its School Department has done an excellent job encapsulating or removing potentially friable asbestos in all of our school buildings, a Comprehensive Renovation Project might expose

latent hazards hidden within the building's old walls or ceiling structures (such as asbestos installed in the 1960's). If discovered, any hazardous materials would have to be completely removed from a school before it could be re-occupied, and the process of removing any hazardous materials would require portions of the building to be sealed off while classes were being held in other areas. If hazardous materials were exposed at any time during the renovation of the 50-year-old High School or the 76-year-old Frolio School, the abatement of those hazardous materials would generate significant additional costs -- and would also require the closing of portions of the building during the abatement work, thus resulting in potentially significant delays and cost increases to other portions of any planned renovation work.

10. INCREASED LABOR COSTS AND PROJECT COMPLETION TIME: The most expensive component of any building project is not the building materials – it is the cost of labor. Since the renovation or new construction of a school building would involve a public building, the Town would be required to pay “prevailing wage” (higher hourly wages set by state law) to all of the laborers involved with the project. Notably, the amount of labor hours required to complete a Comprehensive Renovation Project in an occupied high school is significantly greater than the time required to complete the construction of a new unoccupied building. For example, if the Town elected to renovate the High School building instead of opting for new construction, the renovation project would have to be broken into several phases over a much longer period of time (when compared to the shorter timetable for new construction). Similar to other local towns, if renovation is elected, the building would have to be renovated while it is occupied and used as an active high school. Abington does not have an alternative building which could temporarily house our high school student body and teachers. Therefore, for student safety, portions of the current AHS building will have to be cordoned off for renovation work from time to time, but this type of phased renovation project would significantly extend the expected completion time for the project. Renovations of an active, occupied school would also require many of the upgrades to building systems (electrical, plumbing, heating, etc.) to be installed in phases, with many temporary renovations being installed during construction in order to keep existing systems in operation while the newer systems were installed in piecemeal fashion. Time is money, and the time required to complete a school renovation project would prove to be much more expensive than the time required for new construction. ***Most every town which has recently completed a school construction project has reached the same conclusion, and has voted to proceed with the construction of a new school building as the more cost-efficient solution to their town's long-term needs.***

In sum, many of us are familiar with the costs and issues arising during the renovation of our homes or other private property. But the renovation of a large public building is dramatically different, due to heightened requirements for addressing accessibility, hazardous materials, building code compliance, energy code compliance, health/fire/safety regulations and the rigid enforcement of much higher standards. In the end, the laws and regulations which would apply to a renovation project at Abington's 50-year-old High School and/or the 76-year-old Frolio School would effectively require the Town to replace or reconstruct almost every light, plumbing fixture, door, doorway, window, roof, interior wall, exterior wall, electrical service, plumbing pipe, fire alarm system, boiler, heat system, toilet, sink, and stairwell in the school – and it will take longer to complete the reconstruction of the existing school than the time required to build a new 100% compliant school building to serve Abington's needs for at least the next fifty years.