

# 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

<b>1</b>	Major Milestones Timeline
<b>2</b>	Facilities Evaluation
<b>3</b>	Site Evaluations Summary
<b>4</b>	Educational Visioning Summary Document
<b>5</b>	Educational Programming Document
<b>6</b>	Introduction Document
<b>7</b>	Space Summary Documents
<b>8</b>	Options Considered Document
<b>9</b>	Evaluation Matrix
<b>10</b>	Draft of Cost Analysis Options <span style="float: right;">6 pages</span>
<b>11</b>	Cost of New School vs. Renovation Document
<b>12</b>	Review of Major Milestones

PROJECT BUDGET COMPARISONS (estimated)

	Option #1	Option #1B	Option #2	Option #2B	Option #3	Option #3B	Option #4	Option #4B	Option #5	Option #5B	Option #6	Option #6B	Option #7	Option #7B
New Construction Square Footage	243,494	145,300	223,439	125,540	215,099	117,200	145,000	25,000	145,000	25,000	116,537	116,537	208,872	110,065
Renovation Square Footage	0	111,831	0	111,831	0	111,831	0	111,831	0	111,831	0	116,537	0	111,831
Number of 5-12 Pupils	1,115	1,115	945	945	945	450	450	450	450	450	450	450	770	770
Number of Pre-Kindergarten Pupils	60	60	60	60	60	0	0	0	0	0	0	0	60	60
Base Line MSBA Reimbursement Rate	55.63%	55.63%	55.63%	55.63%	55.63%	55.63%	55.63%	55.63%	55.63%	55.63%	55.63%	55.63%	55.63%	55.63%
<b>Total Project Costs (MSBA Reimbursement Eligible)</b>	<b>\$88,834,255.50</b>	<b>\$91,512,757.88</b>	<b>\$81,341,826.75</b>	<b>\$84,124,537.88</b>	<b>\$78,251,721.75</b>	<b>\$81,034,432.88</b>	<b>\$52,301,250.00</b>	<b>\$47,276,782.88</b>	<b>\$52,301,250.00</b>	<b>\$47,276,782.88</b>	<b>\$42,246,695.25</b>	<b>\$42,246,695.25</b>	<b>\$75,776,034.00</b>	<b>\$78,237,994.13</b>
MSBA Cost Reimbursement (c=a*b)	(\$49,418,496.33)	(\$50,908,547.21)	(\$45,250,458.22)	(\$46,798,480.42)	(\$43,531,432.81)	(\$45,079,455.01)	(\$29,095,185.38)	(\$26,300,074.31)	(\$29,095,185.38)	(\$26,300,074.31)	(\$23,501,836.57)	(\$23,501,836.57)	(\$42,154,207.71)	(\$43,523,796.13)
<b>Total (Eligible) Project Costs NOT Reimbursed by MSBA (d=b-c) which must be paid by Abington</b>	<b>\$39,415,759.17</b>	<b>\$40,604,210.67</b>	<b>\$36,091,368.53</b>	<b>\$37,326,057.46</b>	<b>\$34,720,288.94</b>	<b>\$35,954,977.87</b>	<b>\$23,206,064.63</b>	<b>\$20,976,708.56</b>	<b>\$23,206,064.63</b>	<b>\$20,976,708.56</b>	<b>\$18,744,858.68</b>	<b>\$18,744,858.68</b>	<b>\$33,621,826.29</b>	<b>\$34,714,197.99</b>
<b>Additional Project Costs NOT Reimbursed by MSBA</b>														
Site Resources > 8% Cap	\$3,500,000.00	\$3,500,000.00	\$3,500,000.00	\$3,500,000.00	\$3,500,000.00	\$3,500,000.00	\$3,500,000.00	\$3,500,000.00	\$3,500,000.00	\$3,500,000.00	\$3,500,000.00	\$3,500,000.00	\$3,500,000.00	\$3,500,000.00
Furniture, Equipment & Technology	\$1,410,000.00	\$1,410,000.00	\$1,206,000.00	\$1,206,000.00	\$1,134,000.00	\$1,134,000.00	\$540,000.00	\$540,000.00	\$540,000.00	\$540,000.00	\$540,000.00	\$540,000.00	\$996,000.00	\$996,000.00
<b>Total Additional Project Costs NOT Reimbursed by MSBA (g=e+f)</b>	<b>\$4,910,000.00</b>	<b>\$4,910,000.00</b>	<b>\$4,706,000.00</b>	<b>\$4,706,000.00</b>	<b>\$4,634,000.00</b>	<b>\$4,634,000.00</b>	<b>\$4,040,000.00</b>	<b>\$4,040,000.00</b>	<b>\$4,040,000.00</b>	<b>\$4,040,000.00</b>	<b>\$4,040,000.00</b>	<b>\$4,040,000.00</b>	<b>\$4,496,000.00</b>	<b>\$4,496,000.00</b>
<b>Total Project Cost (NOT reimbursed by MSBA)</b>	<b>\$44,325,759.17</b>	<b>\$45,514,210.67</b>	<b>\$40,797,368.53</b>	<b>\$42,032,057.46</b>	<b>\$39,354,288.94</b>	<b>\$40,588,977.87</b>	<b>\$27,246,064.63</b>	<b>\$24,996,708.56</b>	<b>\$27,246,064.63</b>	<b>\$24,996,708.56</b>	<b>\$22,784,858.68</b>	<b>\$22,784,858.68</b>	<b>\$38,117,826.29</b>	<b>\$39,210,197.99</b>
Renovated 4-5 Frolio	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Renovation Square Footage	51,729	51,729	51,729	51,729	51,729	51,729	51,729	51,729	51,729	51,729	51,729	51,729	51,729	51,729
Number of Pupils	350	350	350	350	350	350	350	350	350	350	350	350	350	350
<b>Total Project Cost (NOT reimbursed by MSBA)</b>	<b>\$22,540,289.71</b>	<b>\$22,540,289.71</b>	<b>\$22,540,289.71</b>	<b>\$22,540,289.71</b>	<b>\$22,540,289.71</b>	<b>\$22,540,289.71</b>	<b>\$22,540,289.71</b>	<b>\$22,540,289.71</b>						
Renovated 7-8 Frolio	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Renovation Square Footage	51,729	51,729	51,729	51,729	51,729	51,729	51,729	51,729	51,729	51,729	51,729	51,729	51,729	51,729
Number of Pupils	350	350	350	350	350	350	350	350	350	350	350	350	350	350
<b>Total Project Cost (NOT reimbursed by MSBA)</b>	<b>\$22,540,289.71</b>	<b>\$22,540,289.71</b>	<b>\$22,540,289.71</b>	<b>\$22,540,289.71</b>	<b>\$22,540,289.71</b>	<b>\$22,540,289.71</b>	<b>\$22,540,289.71</b>	<b>\$22,540,289.71</b>						
New Construction Square Footage	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
Renovation Square Footage	123,000	123,000	123,000	123,000	123,000	123,000	123,000	123,000	123,000	123,000	123,000	123,000	123,000	123,000
Number of Pupils	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140
<b>Total Project Cost (NOT reimbursed by MSBA)</b>	<b>\$93,426,367.33</b>	<b>\$93,426,367.33</b>	<b>\$93,426,367.33</b>	<b>\$93,426,367.33</b>	<b>\$93,426,367.33</b>	<b>\$93,426,367.33</b>	<b>\$93,426,367.33</b>	<b>\$93,426,367.33</b>						
<b>Total Cost to Town of Abington (j=d+g+h+i)</b>	<b>\$44,325,759.17</b>	<b>\$45,514,210.67</b>	<b>\$40,797,368.53</b>	<b>\$42,032,057.46</b>	<b>\$39,354,288.94</b>	<b>\$40,588,977.87</b>	<b>\$27,246,064.63</b>	<b>\$24,996,708.56</b>	<b>\$27,246,064.63</b>	<b>\$24,996,708.56</b>	<b>\$22,784,858.68</b>	<b>\$22,784,858.68</b>	<b>\$38,117,826.29</b>	<b>\$39,210,197.99</b>
Anticipated Additional MSBA Reimbursement (k=b*3%)	(\$2,665,027.67)	(\$2,745,382.74)	(\$2,440,254.80)	(\$2,523,736.14)	(\$2,347,551.65)	(\$2,431,032.99)	(\$1,569,037.50)	(\$1,418,303.49)	(\$1,569,037.50)	(\$1,418,303.49)	(\$1,267,400.86)	(\$1,267,400.86)	(\$2,273,281.02)	(\$2,347,139.82)
<b>Total Cost to Town of Abington after Additional Reimbursement (l=j-k)</b>	<b>\$41,660,731.50</b>	<b>\$42,768,827.93</b>	<b>\$38,357,113.73</b>	<b>\$39,508,321.32</b>	<b>\$37,006,737.29</b>	<b>\$38,157,944.88</b>	<b>\$25,677,027.13</b>	<b>\$23,578,405.07</b>	<b>\$25,677,027.13</b>	<b>\$23,578,405.07</b>	<b>\$21,517,457.82</b>	<b>\$21,517,457.82</b>	<b>\$35,844,545.27</b>	<b>\$36,863,058.17</b>
<b>Summary:</b>														
Total Cost of Option (m=l+b+g+h+i)	\$93,744,255.50	\$96,422,757.88	\$86,047,826.75	\$88,830,537.88	\$105,426,011.46	\$108,208,722.58	\$172,307,907.03	\$167,283,439.91	\$146,377,900.27	\$141,353,433.15	\$108,064,758.33	\$109,144,113.56	\$138,456,279.18	\$140,918,239.30
Less estimated MSBA grand funding (n=c+k)	(\$52,083,524.00)	(\$53,653,929.94)	(\$47,690,713.02)	(\$49,322,216.56)	(\$45,878,984.46)	(\$47,510,487.99)	(\$30,664,222.88)	(\$27,718,377.80)	(\$30,664,222.88)	(\$27,718,377.80)	(\$24,769,237.43)	(\$24,769,237.43)	(\$44,427,488.73)	(\$45,870,935.96)
<b>Estimated Total Cost to Town of Abington</b>	<b>\$41,660,731.50</b>	<b>\$42,768,827.93</b>	<b>\$38,357,113.73</b>	<b>\$39,508,321.32</b>	<b>\$59,547,027.00</b>	<b>\$60,698,234.59</b>	<b>\$141,643,684.16</b>	<b>\$139,565,062.11</b>	<b>\$115,713,677.40</b>	<b>\$113,635,055.35</b>	<b>\$83,295,520.91</b>	<b>\$84,374,876.13</b>	<b>\$94,028,790.44</b>	<b>\$95,047,303.35</b>

# Preliminary Evaluation of Alternatives

## base repair option

The Base Repair Option is **NOT** intended to be a viable solution for the Town of Abington. It does not resolve the overcrowding or educational deficiencies within the Abington Public School system. It does not provide any additional or new educational space, and does not modernize any existing educational space. It does not provide new instructional technology, needed programs, expanded community resources, or many of the educational and community benefits inherent in a viable solution.

The Base Repair Option **IS** intended to identify the significant expenditures **required to** resolve basic infrastructure, accessibility, and code compliance issues within the middle school and high school facilities over the next several years. It is **intended to demonstrate** that it would be much more fiscally responsible to address the **comprehensive needs** of the Abington Public School system with a **viable solution that includes MSBA grant reimbursement funding**, than it would to proceed with unreimbursed (**no grant funding**) capital expenditures for base repairs over the next **several** years. The MSBA requires that a Base Repair option be evaluated in order to **compare it to viable options** which address the comprehensive needs of the district. In the case of **Abington**, the significant cost of the Base Repair Option makes it obvious that **the Town of Abington has managed to keep its school buildings in service for a very long time (1936 Frolio and 1962 High School)**, but now significant infrastructure, accessibility, and code compliance issues must be addressed.

# Frolio Middle School

## Base Repair Option

		<b>BASE REPAIR OPTION</b>	
		Existing 1936 Building: 51,729 sf	
		Minimal Reno - Code and Regulatory compliance only	
		51,729 sf	Major systems requiring replacement
Cost/SF	Cost		Comments
Sitework	\$625,000.00		MA Accessibility compliance on parking, sidewalks, field access, building entries
			All major building entries require significant modifications, as they are half-floor above outside grade.
			All exterior site features utilized by the school (including stadium and stadium bleachers) are non-compliant and are assumed to require compliance as part of any renovations.
Phasing			Work must be conducted during unoccupied periods
General Conditions	\$590,000.00		General Conditions, overhead, profit
Demolition	\$175,000.00		Selective demolition for access to replacement of building systems. ADA/MAB modifications to door entries, corridors, toilets
Asbestos Removal	\$145,000.00		contained selective abatement at disturbed areas
Lead Removal	\$25,000.00		contained selective abatement at exterior windows
Concrete	\$65,000.00		sidewalk/entry/ramping/bleacher replacement/modifications
Masonry	\$150,000.00		Masonry repointing and repair at exterior (not comprehensive, repair only). Masonry modification to interior door openings ADA/MAB compliance
Structural Steel	\$175,000.00		Seismic modifications at building interior. Ramp and lift structure modifications
Lightgage Framing	\$35,000.00		
Misc. Metals	\$30,000.00		Exterior lintel reinforcement @ windows and louvers
Stair	\$40,000.00		ADA/MAB compliance on stairs and landings
Rough Carpentry	\$25,000.00		misc. rough block'g at roof and elec./mech. modifications
Finish Carpentry	\$25,000.00		Repairs at areas modified for accessibility
Waterproof/Sealants	\$20,000.00		replace exterior sealants at joints
Insulation			
Roofing/Flashing	\$360,000.00		Includes complete removal and replacement
Doors (Wood & HM)	\$45,000.00		Interior doors, exterior doors & Fire rated doors required for compliance
Alum. Entrances	\$35,000.00		Replace aluminum storefronts at entries
Alum. Windows	\$670,000.00		Replacement of existing exterior windows
Door Hardware	\$40,000.00		ADA/MAB compliance
Glass & Glazing	\$30,000.00		Rated glass required at fire door assemblies
Drywall	\$35,000.00		Interior modifications for ADA/MAB compliance. Restore selective demo areas where systems have been replaced.
Fire Proofing	\$40,000.00		Repair of firewalls at existing building
Ceramic / Quarry Tile	\$70,000.00		Repair at handicap toilet modifications
Acoustical Ceilings	\$170,000.00		Full Replacement of existing ceiling system due to disturbance associated with systems replacement and non-compliant met-away tiles.
Acoustical Panels			
Wood Flooring			



## Feasibility Study - Abington Public Schools

	Cost/SF	Cost	Comments
Resilient Flooring		\$20,000.00	Selective replacement where door entries have been modified for accessibility
Carpet			
Painting		\$40,000.00	Patch/paint disturbed areas only
Theatrical Equipment			
Misc. Specialties		\$28,000.00	Interior ADA signage
Food Service Equip.		\$125,000.00	Some reconfiguration and equipment replacement required for code compliance
Gym Equipment			
Casework / Fixed		\$145,000.00	ADA/MAB modifications to non-compliant cabinets, counters, casework
Assembly seating			
Bleachers		\$35,000.00	ADA/AAB Compliance modifications at assembly areas
Elevator		\$325,000.00	Elevator retrofit required; possibly in two locations.
Fire Protection		\$175,000.00	Reconfiguration of existing system to meet current code compliance
Plumbing		\$925,000.00	fixture replace, vacuum break, domestic upgrade, sanitary main replacement
HVAC		\$1,650,000.00	replace non-compliant and deteriorated systems. Addition of automated controls
Electrical & Telecom.		\$775,000.00	partial power, partial data, partial lighting, fire alarm replacement
<b>Total Building cost</b>	<b>\$139.92</b>	<b>\$7,238,000.00</b>	
<b>Total Site cost</b>	<b>\$12.08</b>	<b>\$625,000.00</b>	
<b>Total Building &amp; Site</b>	<b>\$152.00</b>	<b>\$7,863,000.00</b>	
A/E Fees		\$786,300.00	architectural and engineering design fees
Owner's Project Manager (OPM) fees		\$235,890.00	Management of design and construction
Topographical survey		\$15,000.00	For exterior modifications and design
Geotech investigation		\$5,000.00	For exterior ramp and stair design
Permitting			
Move Management			
Owner admin. Costs		\$15,000.00	
Printing / Advertising		\$30,000.00	printing of bid documents and public advertising
Construction testing		\$15,000.00	required independent testing during construction
Furniture & Equipment		\$175,000.00	minimal amount of ADA/MAB compliant furniture
Technology		\$225,000.00	security, phones, access controls for new ADA/MAB doors and hardware
Project Contingency		\$786,300.00	project and construction contingency
Project Management/Commissioning			
<b>Total Project Cost</b>	<b>\$196.24</b>	<b>\$10,151,490.00</b>	
MSBA Reimbursement	\$0.00	\$0.00	0%
<b>Total Cost to Abington</b>	<b>\$196.24</b>	<b>\$10,151,490.00</b>	

\* Costs are derived from a database of Massachusetts Public School projects which were bid during the past three years. Two years of 5% inflation have been added to all costs to reflect the fact that projects would have to be staggered over a minimal two-year period.

\* Costs do not include interest and other borrowing costs

\* MSBA reimbursement is stated as zero, under the assumption that the above capital expenditures do not address many of the significant overcrowding and educational deficiencies and therefore would not qualify for MSBA reimbursement.

# Abington High School

## Base Repair Option

		<b>BASE REPAIR OPTION</b>	
		Existing 1962 Building: 111,831 sf	
		Minimal Reno - Code and Regulatory compliance only	
		Major systems requiring replacement	
		111,831 sf	
Cost/SF	Cost	Comments	
Sitework	\$575,000.00	MA Accessibility compliance on parking, sidewalks, field access, building entries	
		All major building entries require significant modifications, as they are half-floor above outside grade.	
		All exterior site features utilized by the school (including stadium and stadium bleachers) are non-compliant and are assumed to require compliance as part of any renovations.	
Phasing		Work must be conducted during unoccupied periods	
General Conditions	\$590,000.00	General Conditions, overhead, profit	
Demolition	\$240,000.00	Selective demolition for access to replacement of building systems. ADA/MAB modifications to door entries, corridors, toilets	
Asbestos Removal	\$195,000.00	contained selective abatement at disturbed areas	
Lead Removal			
Concrete	\$135,000.00	sidewalk/entry/ramping/bleacher replacement/modifications	
Masonry	\$25,000.00	Minor masonry repointing and repair at exterior (not comprehensive, repair only). Masonry modification to interior door openings ADA/MAB compliance	
Structural Steel	\$225,000.00	Seismic modifications at building interior. Ramp and lift structure modifications	
Lightgage Framing	\$50,000.00	Interior modifications for ADA/MAB compliance. Restore selective demo areas where systems have been replaced.	
Misc. Metals			
Stair	\$65,000.00	ADA/MAB compliance on stairs and landings	
Rough Carpentry	\$35,000.00	misc. rough block'g at roof and elec./mech. modifications	
Finish Carpentry	\$30,000.00	Repairs at areas modified for accessibility	
Waterproof/Sealants	\$10,000.00	replace exterior sealants at joints	
Insulation			
Roofing/Flashing	\$510,000.00	Includes complete removal and replacement	
Doors (Wood & HM)	\$65,000.00	Interior doors, exterior doors & Fire rated doors required for compliance	
Alum. Entrances			
Alum. Windows			
Door Hardware	\$65,000.00	ADA/MAB compliance	
Glass & Glazing	\$40,000.00	Rated glass required at fire door assemblies	
Drywall	\$75,000.00	Interior modifications for ADA/MAB compliance. Restore selective demo areas where systems have been replaced.	
Fire Proofing	\$80,000.00	Repair of firewalls at existing building	
Ceramic / Quarry Tile	\$110,000.00	Repair at handicap toilet modifications	
Acoustical Ceilings	\$170,000.00	Full Replacement of existing ceiling system due to installation of new utilities and fire protection system	
Acoustical Panels			
Wood Flooring			



## Feasibility Study - Abington Public Schools

	Cost/SF	Cost	Comments
Resilient Flooring		\$25,000.00	Selective replacement where door entries have been modified for accessibility
Carpet			
Painting		\$65,000.00	Patch/paint disturbed areas only
Theatrical Equipment			
Misc. Specialties		\$62,000.00	Interior ADA signage
Food Service Equip.		\$90,000.00	Some reconfiguration and equipment replacement required for code compliance
Gym Equipment			
Casework / Fixed		\$175,000.00	ADA/MAB modifications to non-compliant cabinets, counters, casework
Assembly seating			
Bleachers		\$150,000.00	ADA/AAB Compliance modifications at assembly areas
Elevator		\$450,000.00	Elevator retrofit required; possibly in two locations.
Fire Protection		\$440,000.00	New fire protection (sprinkler) system to meet current code requirements
Plumbing		\$1,150,000.00	fixture replace, vacuum break, domestic upgrade, sanitary main replacement
HVAC		\$2,100,000.00	replace non-compliant and deteriorated systems. Addition of automated controls
Electrical & Telecom.		\$1,250,000.00	partial power, partial data, partial lighting, fire alarm replacement
Total Building cost	\$77.55	\$8,672,000.00	
Total Site cost	\$5.14	\$575,000.00	
<b>Total Building &amp; Site</b>	<b>\$82.69</b>	<b>\$9,247,000.00</b>	
A/E Fees		\$924,700.00	architectural and engineering design fees
Owner's Project Manager (OPM) fees		\$277,410.00	Management of design and construction
Topographical survey		\$15,000.00	For exterior modifications and design
Geotech investigation		\$5,000.00	For exterior ramp and stair design
Permitting			
Move Management			
Owner admin. Costs		\$15,000.00	
Printing / Advertising		\$30,000.00	printing of bid documents and public advertising
Construction testing		\$15,000.00	required independent testing during construction
Furniture & Equipment		\$225,000.00	minimal amount of ADA/MAB compliant furniture
Technology		\$225,000.00	security, phones, access controls for new ADA/MAB doors and hardware
Project Contingency		\$924,700.00	project and construction contingency
Project Management/Commissioning			
<b>Total Project Cost</b>	<b>\$106.44</b>	<b>\$11,903,810.00</b>	
MSBA Reimbursement	\$0.00	\$0.00	0%
<b>Total Cost to Abington</b>	<b>\$106.44</b>	<b>\$11,903,810.00</b>	

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\* MSBA reimbursement is stated as zero, under the assumption that the above capital expenditures do not address many of the significant overcrowding and educational deficiencies and therefore would not qualify for MSBA reimbursement.