

District: Town of Billerica
 School Name: Billerica Memorial High School
 Recommended Category: Preferred Schematic
 Date: July 30, 2015

Recommendation

That the Executive Director be authorized to approve the Town of Billerica, as part of its Invitation to Feasibility Study, to proceed into Schematic Design to replace the existing Billerica Memorial High School on the existing site. MSBA staff has reviewed the Feasibility Study and accepts the District’s preferred solution.

District Information	
District Name	Town of Billerica
Elementary Schools	Eugene C. Vining School (K-5) Frederick J. Dutile School (K-5) Hajjar Elementary School (K-5) John F. Kennedy School (K-5) Parker Elementary School (K-5) Thomas Ditson Elementary School (K-5)
Middle Schools	Locke Middle School (6-8) Marshall Middle School (6-8)
High Schools	Billerica Memorial High School (PK; 9-12)
Priority School Name	Billerica Memorial High School
Type of School	High School
Grades Served	9-12
Year Opened	1954
Existing Square Footage	396,660
Additions	1975: Major Addition
Acreage of Site	75 acres
Building Issues	The District identified deficiencies in the following areas: <ul style="list-style-type: none"> – Mechanical systems – Electrical systems – Envelope – Windows – Accessibility In addition to the physical plant issues, the District reported that the existing facility does not support the delivery of its educational program.
Original Design Capacity	Unknown
2014-2015 Enrollment	1,436 students
Agreed Upon Enrollment	Study Enrollment includes the following configurations: <ul style="list-style-type: none"> – 1,205 students (grade configuration 9-12) – 1,610 students (grade configuration 8-12) (<i>Preferred Solution</i>)
Enrollment Specifics	Contingent upon the Board’s approval of the preferred solution, the District will sign a Design Enrollment Certification for 1,610 students in grades 8-12, for a project that will serve grades PK and 8-12.

MSBA Board Votes	
Invitation to Eligibility Period	January 29, 2014
Invitation to Feasibility Study	June 4, 2014
Preferred Schematic Authorization	On August 6, 2015 Board agenda
Project Scope & Budget Authorization	District is targeting Board authorization on January 27, 2016
Feasibility Study Reimbursement Rate (<i>Incentives points are not applicable</i>)	52.06%

Consultants	
Owner's Project Manager	KV Associates, Inc.
Designer	Perkins+Will

Discussion

The existing Billerica Memorial High School is a 396,660 square foot facility on a 75 acre site. The existing facility currently houses grades 9-12. The original school building was constructed in 1954 with upgrades and additions completed in 1975. The District identified numerous deficiencies in the Statement of Interest. The existing facility conditions include: poor energy efficiency; outdated mechanical, electrical, and plumbing systems; non-compliant accessibility conditions; and the presence of hazardous materials. In addition, the existing building is poorly configured and oversized, and it does not meet the educational needs of the District.

In conjunction with its consultants, the District performed a comprehensive assessment of the existing conditions and the educational program and received input from educators, administrators, and facilities personnel. Based on the findings of this effort, the District and its consultants initially studied eight preliminary options, which included four addition/renovation configurations and four new construction options. The following is a detailed list of the preliminary alternatives considered:

Option	Description of Preliminary Options
1	Code upgrade (including both 8-12 and 9-12 alternates)
2	Full renovation (including both 8-12 and 9-12 alternates)
3	Hybrid of renovation and building addition for 8-12
3.1	Hybrid of renovation and building addition for 9-12
4A	New construction at existing site for 8-12
4A.1	New construction at existing site for 9-12
4B	New construction at Cider Mill site for 8-12
4B.1	New construction at Cider Mill site for 9-12

Based on input from the design team regarding estimated project costs of the options, the District voted in a public meeting to eliminate the 9-12 grade configuration options for further consideration, leaving the 8-12 options. To allow for reduced project cost alternatives for the District, "deduct" options were developed for each site option to remove some (but not all) baseball and softball fields from the scope of work. Finally, Option 4A was replaced with Option 4AR, a revised and improved version of the previous 4A design. A comparative cost analysis

indicated that the proposed new construction projects on the existing site were the most cost-effective options, followed by new construction on the Cider Mill site. Least cost-effective was the addition/renovation option on the existing site. Upon further review, MSBA staff and the District agreed to five options for further development and consideration in the final evaluation and development of preliminary design pricing as presented below:

Summary of Preliminary Design Pricing for Final Evaluation of Options

Option (Description)	Total Gross Square Feet	Square Feet of Renovated Space (cost*/sf)	Square Feet of New Construction (cost*/sf)	Site, Building Takedown, Haz Mat. Cost*	Estimated Total Construction** (cost*/sf)	Estimated Total Project Costs
Option 3: (8-12 Addition / Renovation of the Existing Building)	385,749	278,899 \$320/sf	106,850 \$381/sf	\$20,999,921	\$150,988,440 \$391/sf	\$194,911,222
Option 4AR: (8-12 New Construction at the Existing Site)	323,200	NA	323,200 \$356/sf	\$29,356,360	\$144,544,444 \$447/sf	\$179,980,896
Option 4AR “Deduct”: (8-12 New Construction at the Existing Site)***	323,200	NA	323,200 \$357/sf	\$21,839,018	\$137,344,241 \$425/sf	\$171,293,076
Option 4B: (8-12 New Construction at the Cider Mill Site)	322,700	NA	322,700 \$372/sf	\$28,308,281	\$148,359,161 \$460/sf	\$187,321,454
Option 4B “Deduct”: (8-12 New Construction at the Cider Mill Site)	322,700	NA	322,700 \$372/sf	\$27,094,035	\$147,194,122 \$456/sf	\$185,653,270

* *Marked up construction costs*

** *Does not include construction contingency*

*** *District’s preferred option*

The District has selected “Option 4AR ‘Deduct’: 8-12 New Construction at Existing Site” as the preferred solution to proceed into Schematic Design. The District selected this Option as its preferred alternative because it can accommodate the District’s full educational plan while being the most cost-effective option.

The District presented its proposed project to the MSBA Facilities Assessment Subcommittee (“FAS”) on July 8, 2015. At that meeting, members of the FAS raised a number of concerns regarding: the layout; flexibility and means of egress of maker spaces; robotics and science labs; the extent of ineligible spaces; community outreach; the District’s financial capacity to finance the project; teacher certification; transition associated with grade reconfiguration; and the proximity of the proposed building to abutting condominiums.

MSBA staff reviewed the conclusions of the Feasibility Study, all subsequent submittals, and the enrollment data with the District and found:

- 1) MSBA reviewed the Feasibility Study and subsequent material and finds that the options investigated were sufficiently comprehensive in scope, the approach undertaken in this study was appropriate, and the District’s preferred solution is reasonable and cost-effective and meets the needs identified by the District.

- 2) The District has submitted an operational budget for educational objectives and a capital budget statement for MSBA review.
- 3) The District's schematic design submittal will be subject to final review and approval by the Department of Elementary and Secondary Education as part of the schematic design submittal prior to a Project Scope and Budget Agreement.
- 4) Subject to Board approval, the MSBA will participate in a project that includes spaces that meet MSBA guidelines, with the exception of variations previously agreed to by the MSBA. All proposed spaces will be reviewed during the Schematic Design phase.
- 5) As part of the Schematic Design phase, the District will work with the MSBA to determine a mutually agreeable methodology to differentiate eligible costs from ineligible costs.

Based on the review outlined above, staff recommends that the Town of Billerica be approved to proceed into Schematic Design to replace the existing Billerica Memorial High School on the existing site.