

District: City of Worcester
 School Name: Doherty Memorial High School
 Recommended Category: Preferred Schematic
 Date: April 8, 2020

Recommendation

That the Executive Director be authorized to approve the City of Worcester (the “District”), as part of its Invitation to Feasibility Study, to proceed into Schematic Design to replace the existing Doherty Memorial High School with a new facility on the existing site. MSBA staff has reviewed the Feasibility Study and accepts the District’s Preferred Schematic.

District Information	
District Name	City of Worcester
Elementary Schools	1 (PK) 20 (PK–6) 13 (K–6)
Middle Schools	1 (6–8) 3 (7–8)
High Schools	1 (7–12) 5 (9–12) 1 (11–12)
Priority School Name	Doherty Memorial High School
Type of School	High School
Grades Served	9-12
Year Opened	1966
Existing Square Footage	167,000
Additions	N/A
Acreage of Site	20 acres
Building Issues	The District identified deficiencies in the following areas: <ul style="list-style-type: none"> – Mechanical systems – Electrical systems – Plumbing systems – Building envelope – Windows – Roof – 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
2018-2019 Enrollment	1,529
Agreed Upon Enrollment	1,670
Enrollment Specifics	The District and MSBA have mutually agreed upon a design enrollment of 1,670 students serving grades 9-12.
Total Project Budget – Debt Exclusion Anticipated	No

MSBA Board Votes	
Invitation to Eligibility Period	February 15, 2017
Invitation to Feasibility Study	February 14, 2018
Preferred Schematic Authorization	On April 15, 2020 Board agenda
Project Scope & Budget Authorization	District is targeting Board authorization on August 26, 2020
Feasibility Study Reimbursement Rate (Incentive points are not applicable)	78.95%

Consultants	
Owner’s Project Manager (the “OPM”)	Tishman Construction Corporation of Massachusetts
Designer	Lamoureux Pagano Associates Architects, Inc.

Discussion

The existing Doherty Memorial High School is a 167,000 square foot facility located on a 20-acre site that currently serves students in grades 9-12. The original school building was constructed in 1966 with a roof replacement in 1995, a boiler replacement in 2005, and the rooftop units were replaced in 2007.

The District’s Statement of Interest identifies numerous deficiencies in the existing facility associated with the following: outdated mechanical, electrical, and plumbing systems; the building envelope; windows; roofing; accessibility issues; and appropriateness of existing spaces to deliver the District’s Education Program.

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 six (6) preliminary options that included one (1) base repair option, one (1) addition/renovation option, and four (4) new construction options. The following is a detailed list of the preliminary options considered.

Option	Description of Preliminary Options
Base Repair	Base Repair/Code Upgrade at the existing Doherty Memorial High School.
Addition/ Renovation	Addition/Renovation at the existing Doherty Memorial High School.
A.1	New Construction at the existing Doherty Memorial High School site.
B.1	New Construction at the Foley Stadium site.
C.1	New Construction at the Chandler Magnet School site.
C.2	New Construction at the Chandler Magnet School site with added land.

As a result of this analysis, the District determined that “Option C.1” would not be further evaluated because utilizing the Chandler Magnet School site would result in a narrow building

design, the cutting of adjacent woodlands for fields, and challenges associated with the existing site topography.

Subsequent to the evaluation of the preliminary options, the District developed two (2) additional new construction options on the existing Doherty Memorial High School site as “Option A.2” and “Option A.3”. MSBA staff and the District agreed to seven (7) final options for further development and consideration in the final evaluation and development of the preliminary design pricing, which are presented in the table below.

Summary of Preliminary Design Pricing for Final Evaluation of Options

Option (Description)	Total Gross Square Feet	Square Feet of Renovated Space (cost*/sq. ft.)	Square Feet of New Construction (cost*/sq. ft.)	Site, Building Takedown, Haz Mat. Cost*	Estimated Total Construction ** (cost*/sq. ft.)	Estimated Total Project Costs
Base Repair Option	167,000	167,000 \$313/sq. ft.	N/A	\$30,072,287	\$82,378,357 \$493/sq. ft.	\$102,972,946
Addition/ Renovation Option	420,000	98,000 \$279/sq. ft.	322,000 \$460/sq. ft.	\$47,148,580	\$222,438,660 \$530/sq. ft.	\$278,048,325 ^
***Option A.1: New Construction on the existing Doherty Memorial HS site	420,000	N/A	420,000 \$461/sq. ft.	\$41,423,534	\$235,060,334 \$560/sq. ft.	\$293,825,418 ^
Option A.2: New Construction on the existing Doherty Memorial HS site	420,000	N/A	420,000 \$438/sq. ft.	\$52,138,323	\$236,035,323 \$562/sq. ft.	\$295,044,154 ^
Option A.3: New Construction on the existing Doherty Memorial HS site	420,000	N/A	420,000 \$444/sq. ft.	\$63,375,297	\$250,052,697 \$595/sq. ft.	\$312,565,871 ^
Option B.1: New Construction on the Foley Stadium site	420,000	N/A	420,000 \$474/sq. ft.	\$30,505,872	\$229,745,472 \$547/sq. ft.	\$287,181,840
Option C.2: New Construction on the Chandler Magnet site with added land	420,000	N/A	420,000 \$439/sq. ft.	\$29,769,806	\$214,107,806 \$510/sq. ft.	\$267,634,758

* Marked up construction costs

** Does not include construction contingency

*****District’s Preferred Schematic**

^ Includes site costs associated with parking under the building

The District has selected “Option A.1”, new construction, as the Preferred Schematic to proceed into Schematic Design. “Option A.1” was selected because the District determined that this option meets the needs of the District’s educational program, provides the greatest opportunities for views and daylight for all teaching spaces, and locates parking below the building which the District views as advantageous.

The District determined that the “Base Repair Option” and “Addition/Renovation Option” were not viable options because they do not meet the needs of the District’s educational program, result in an extended construction schedule, and construction phasing of an occupied building would result in significant disruption to ongoing education during construction.

Although “Option A.2” meets the needs of the District’s educational program, the District determined that the proposed compact massing associated with this option provides limited opportunities to break down the scale of the facility. Although “Option A.3” meets the needs of the District’s educational program, the District determined that concerns about the limitations of an elevated athletic field and the expense to the District was higher than the other options.

“Option B.1” was not selected because the District determined that in addition to the challenges associated with existing soil conditions, this option would require the replacement of the existing district-wide athletic facilities at the Foley Stadium, which combined with the proposed building has been estimated to exceed the cost of the Preferred Schematic.

“Option C.2” was not selected because the District determined that this option requires the demolition of the existing Chandler Magnet School and the District does not have a facility to accommodate all 500 elementary students currently enrolled in the bilingual and dual language programs that are currently housed there. Additionally, this option includes land acquisition and challenging site topography.

The District presented its proposed Preferred Schematic to the MSBA Facilities Assessment Subcommittee (“FAS”) on January 22, 2020. At that meeting, members of the FAS discussed the following: proposed gymnasium design with movable partitions and the MSBA’s gymnasium square footage policy; storage of gym, wellness, and adaptive physical education equipment; relationship between the Educational Program and building design, including makerspaces, science programs, adjacencies of the biotechnical program, student class sizes, grade and departmental groupings, and student navigation of the building; location of the Performing Arts Makerspace relative to the auditorium; appreciation of the building’s compact design and relationship between public and academic spaces; distribution of Special Education spaces; District’s plan to simultaneously incorporate three additional Chapter 74 approved programs; development of the site plan including the connection to Elm Park and the approach to the building; number and location of parking spaces; and, schedule related to subsequent submissions and local vote authorizations.

Based on the District’s presentation and feedback at the January 22, 2020 FAS meeting, the MSBA requested that the District submit an updated Preferred Schematic Report to further clarify and confirm that the proposed concept has been sufficiently developed to meet the needs of the District’s educational program and revise the design of the gymnasium and adjacent spaces to comply with the MSBA’s policy regarding maximum gymnasium size of 18,000 net square feet. This updated submission was received on February 18, 2020, and staff presented an update at the March 25, 2020 FAS meeting.

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

- 1) The options investigated were sufficiently comprehensive in scope, the approach undertaken in this study was appropriate, and the District's Preferred Schematic 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, which is prior to executing 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, except for 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 City of Worcester be approved to proceed into Schematic Design to replace the existing Doherty Memorial High School with a new facility on the existing site.