

District: Bristol-Plymouth Regional Vocational Technical School District
 School Name: Bristol-Plymouth Regional Vocational Technical High School
 Recommended Category: Preferred Schematic
 Date: February 3, 2021

Recommendation

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

District Information	
District Name	Bristol-Plymouth Regional Vocational Technical School District
Elementary School(s)	N/A
Middle School(s)	N/A
High School(s)	Bristol-Plymouth Regional Vocational Technical High School (9-12)
Priority School Name	Bristol-Plymouth Regional Vocational Technical High School
Type of School	High School
Grades Served	9-12
Year Opened	1972
Existing Square Footage	203,113
Additions	4,800 square foot nursing building added in 1997; 3,600 square foot auto tech building added in 1999, 20,755 square foot addition/renovation project in 2001, 2,700 square foot addition in 2012 for health programs.
Acreage of Site	68 acres
Building Issues	The District identified deficiencies in the following areas: <ul style="list-style-type: none"> – Mechanical systems – Electrical systems – Plumbing systems – Envelope – Windows – Roof – Doors – Accessibility In addition to the physical plant issues, the District reported that the existing facility does not support the delivery of its educational program as well as existing and projected overcrowding.
Original Design Capacity	740
2020-2021 Enrollment	1,319
Agreed Upon Enrollment	1,300 as Currently Configured (Grade Configuration 9-12)

District Information	
	1,540 with Proposed Expansion of Chapter 74 Programming (Grade Configuration 9-12) Between 1,300-1,540 with Expansion of Chapter 74 Programming (Grade Configuration 9-12) (Preferred Schematic)
Enrollment Specifics	Contingent upon the Board's approval of the Preferred Schematic, the District will sign a Design Enrollment Certification for 1,434 students serving grades 9-12.
Total Project Budget – Debt Exclusion Anticipated	Yes

MSBA Board Votes	
Invitation to Eligibility Period	December 13, 2017
Invitation to Feasibility Study	June 26, 2019
Preferred Schematic Authorization	On February 11, 2021 Board agenda
Project Scope & Budget Authorization	District is targeting Board authorization on October 27, 2021
Feasibility Study Reimbursement Rate (Incentive points are not applicable)	57.74%

Consultants	
Owner's Project Manager (the "OPM")	PMA Consultants, LLC
Designer	HMFH Architects, Inc.

Discussion

The existing Bristol-Plymouth Regional Vocational Technical High School is a one-story 203,113 square-foot facility located on a 68-acre parcel of land that was a former dairy farm site in Taunton, Massachusetts. Construction of the original school building commenced in 1968, with four additions completed between 1997 and 2012. The existing facility currently houses approximately 1,319 students in grades 9-12 and offers (20) Chapter 74 career vocational programs. The Regional District includes the communities of Bridgewater, Raynham, Taunton, Berkley, Dighton, Rehoboth, and Middleboro.

The District identified numerous deficiencies in the Statement of Interest, including inadequate education and vocational shop spaces, building envelope, roof, doors, and windows. All heating, ventilation, electrical, and plumbing systems are at the end of their useful life, and the existing facility lacks adequate space for student support and special education programs. Additionally, the existing science labs are undersized creating overcrowding and reported safety issues. The District has also indicated deficiencies in the existing site drainage, and the building and site are not fully accessible to those with physical challenges.

As part of the Feasibility Study, the MSBA mutually agreed with the District to explore at least three enrollment options for students in grades 9-12: 1,300 (existing enrollment), 1,540 (full expansion of Chapter 74 program offerings to provide opportunities for wait-listed students), and one or more options between 1,300-1,540 students. The District established a third enrollment option of 1,434 students to study expansion of its most popular wait-listed vocational programs

(Biotechnology, Community Health, Plumbing, HVAC, Engineering Technology, and Robotics) as part of the Feasibility Study.

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 seven preliminary options that included (1) base repair option, (3) addition/renovation configurations of varying sizes, and (3) new construction options as presented below.

Option	Description of Preliminary Options
A	Base Repair - Comprehensive renovation of the existing building to address facility maintenance and code compliance.
B	Addition/Renovation - Comprehensive renovation and adds (2) additions in the parking area at the back of the school.
C	Addition/Renovation – Demolishes a majority of the existing facility, new construction behind the existing school facility, renovates the existing Gymnasium and locker rooms to become a free-standing Field House.
C1	Addition/Renovation – Demolishes a majority the existing facility, new construction on the existing football field, attaches to a renovated and expanded existing Gymnasium and locker rooms.
D1	New Construction - new construction in the middle of the existing site with the entrance facing North.
D2	New Construction - new construction in the middle of the existing site with the entrance facing South.
D3	New Construction - new construction in the middle of the existing site with the entrance facing East.

The District determined that “Option A”, the base repair, is not a viable option. However, this option is included in the final evaluation of alternatives for cost comparison purposes.

“Option B” was eliminated from further consideration by the District because of the anticipated disruption to education that will occur with this option as a result of the estimated longer construction duration. The District noted that another disadvantage of the longer construction duration is that four full classes of students would only experience the construction phase throughout their time at Bristol-Plymouth. The District has also indicated that temporary modular classrooms would be required, and there are reported significant safety and security concerns related to occupied phased construction. Additionally, with the exception of the Base Repair option, this option ranked last of all the options studied.

Although “Option C”, proposes new construction that will be substantially separate from the existing building, it was eliminated from further consideration by the District because of the anticipated disruption to students due to the close proximity of the anticipated work zone. Additionally, similar to “Option B”, modular classrooms would be needed for much of the construction duration. The District also determined that this option does not achieve the School Committee’s goal of increasing presence and visibility from Route 24.

“Option D1” was eliminated from further consideration by the District because of the less-desirable proposed building orientation as this option proposed siting the main entry facing north, which the District has indicated also does not achieve the School Committee’s goal of increasing presence and visibility from Route 24.

The District noted in its Preliminary Design Program submittal that a thorough study of enrollment options included review of the economic climate and anticipated support from its sending communities and concluded that now is not the right time to add new programs and eliminated the 1,540-student enrollment option from further consideration. Design options for both the 1,300 and 1,434 student enrollment options were developed for “Options C1”, “D2”, and “D3”. Seven options were further developed and considered in the final evaluation of options. The associated preliminary design pricing is presented 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
Option A: Base Repair	203,113	203,113 \$455/sq. ft.	N/A	\$9,303,876	\$101,797,036 \$501/sq. ft.	\$137,175,039
Option C1.a: Addition/Renovation (1,300 students)	430,660	24,624 \$527/sq. ft.	406,036 \$520/sq. ft.	\$29,978,743	\$254,097,345 \$590/sq. ft.	\$341,923,863
Option C1.b: Addition/Renovation (1,434 students)	457,052	24,624 \$530/sq. ft.	432,428 \$516/sq. ft.	\$30,134,583	\$266,325,745 \$583/sq. ft.	\$358,552,988
Option D2.a: New Construction (1,300 students)	429,110	N/A	429,110 \$512/sq. ft.	\$31,370,364	\$250,858,976 \$583/sq. ft.	\$322,558,818
Option D2.b: New Construction (1,434 students)	451,107	N/A	451,107 \$512/sq. ft.	\$31,609,353	\$262,556,183 \$582/sq. ft.	\$337,752,061
Option D3.a: New Construction (1,300 students)	429,110	N/A	429,110 \$508/sq. ft.	\$30,683,783	\$248,571,51 \$579/sq. ft.	\$319,622,675
Option D3.b:*** New Construction (1,434 students)	451,107	N/A	451,107 \$506/sq. ft.	\$30,875,404	\$259,057,076 \$574/sq. ft.	\$333,301,198

* Marked up construction cost

** Does not include construction contingency

***District’s Preferred Schematic

The District has selected “Option D3.b”, a new two-story building as its Preferred Schematic to proceed into Schematic Design. The District has indicated the Preferred Schematic best meets the educational goals identified by the District. This option expands the enrollment to allow vocational educational opportunities for wait-listed students currently unable to secure a spot in the most popular vocational programs, such as Biotechnology, Community Health, HVAC,

Engineering Technology, and Robotics. Academic classrooms are proposed to be grouped together in a flexible layout with hands-on project areas located between vocational and academic programs. The District has indicated that this option provides the required adjacencies for all vocational programs, academic spaces, and locates the main entrance clearly visible from approaching roadways.

The Preferred Schematic also proposes to provide educational spaces with natural light and views to the outdoor environment. Vocational shops are proposed to be located along the perimeter of the building, and academic classrooms located along the perimeter of the courtyard. Vocational shops and labs anticipate visibility from the corridors to promote project-based learning. In addition, the District anticipates that this option will result in a shorter construction schedule compared to many other options, maintains athletic field use during construction, and does not require modular classrooms.

As indicated above, “Option A”, the base repair was carried for cost comparison purposes. During the Preliminary Design Phase, the District indicated the Base Repair is not a viable option for the District because it does not alleviate their biggest issue which is overcrowding in all the vocational program spaces.

“Options C1.a”, “D2.a”, and “D3.a” were not selected because these options do not expand enrollment for the most popular vocational programs, which was viewed as a disadvantage of these options by the District.

Although “Option C1.b” allows for some desirable educational adjacencies and achieves some of the District’s targeted goals, this option was eliminated from further consideration. The District determined that the proposed construction phasing would result in significant disruption to the physical education curriculum and would not provide enough separation for students from the anticipated work zones during the renovation of the occupied building. Additionally, the District indicated that another disadvantage of this option is the estimated duration of the construction schedule, resulting in added project costs without added educational value.

The District determined that the proposed site layout for “Option D2.b” is less desirable than the preferred option because it does not include two primary building entrances, has a larger footprint, constrains the placement of the new athletic fields, and has a less than optimal orientation. Additionally, the District determined that the proximity of this option to Route 24 is a drawback because of anticipated highway noise.

The District presented its proposed Preferred Schematic to the MSBA Facilities Assessment Subcommittee (“FAS”) on January 20, 2021. At that meeting, FAS members discussed a number of items including: the appreciation for the educational program; use and maintenance of the proposed courtyard; connection between the educational program and proposed organization of academic spaces including the media center to the academic classrooms, and science labs to the vocational spaces and academic classrooms; further refinement of floor plans; media center identified as the hub of the building; use and maintenance of the proposed project areas; staffing related to the media center; project design alignment with educational program goals; building’s clear organization strategy; further refinement of the western facing outdoor roof area and garden; appreciation for healthy landscape zone around the building; and further development of the building’s massing and form.

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 Special Education submission 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 Bristol-Plymouth Regional Vocational Technical School District be approved to proceed into Schematic Design to replace the existing Bristol-Plymouth Regional Vocational Technical High School with a new facility on the site of the existing school. MSBA staff has reviewed the Feasibility Study and accepts the District's Preferred Schematic.