CASE STUDY

Rendering courtesy of RRMM Architects

PRINCESS ANNE MIDDLE SCHOOL

Improving processes and maximizing investments

CHALLENGE

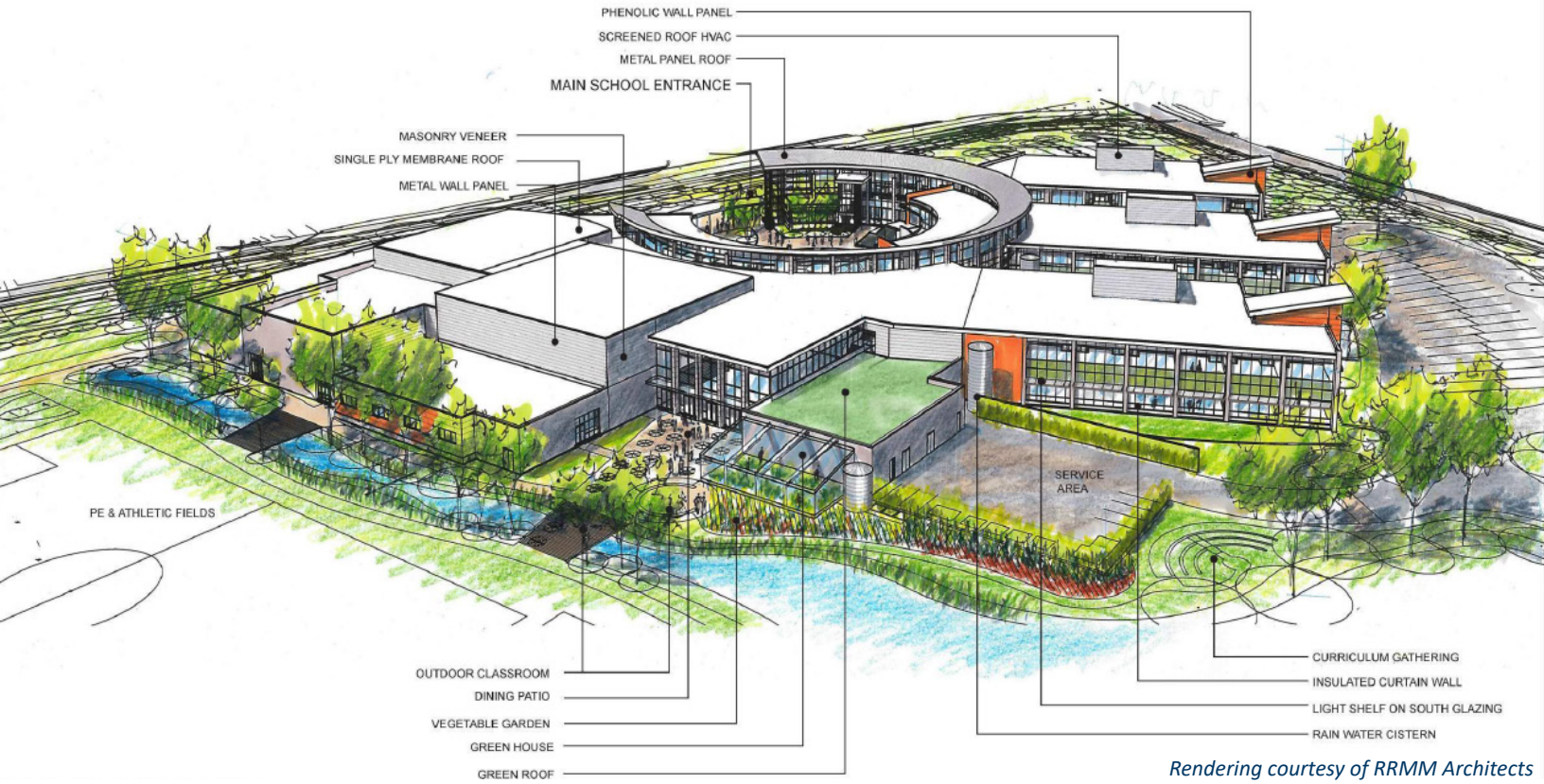
Virginia Beach City Public Schools was interested in conducting a value engineering (VE) workshop to assist them in designing and constructing high-efficiency schools to support a modern educational program with high-performance building systems. The workshop was facilitated for the Princess Anne Middle School–a new, two-story, 257,000-gross-square-foot replacement school serving a student population of 1,500 and 122 faculty and staff. The facility was constructed on a 24-acre site at the location of the existing Princess Anne Middle School. This building has a separate classroom wing for each of the three grade levels. In addition to the classroom wings, the building program includes the following elements: school administration; music, orchestra, and choir rooms; physical education gymnasium; design and innovation center; visual arts; theater, auditorium, and performance space; and kitchen and dining. Site components include: football, soccer, baseball, and softball fields; competition track; basketball courts; bus, faculty, staff, and visitor parking areas; and greenhouse and amphitheater curriculum teaching spaces. The original estimated project construction cost was $60 million.

SOLUTION

MBP facilitated a formal VE workshop utilizing an independent team of architects and engineers to identify value-enhancement ideas on the design development documents. The VE study was conducted in accordance with the practices recommended by SAVE International.

RESULT

The five-day VE workshop identified 103 value improvement ideas during the creative phase of the study. After these ideas were evaluated based on subjective criteria for project improvement, 54 of these were determined to enhance the value of the project and were developed as formal proposals. The 54 proposals are estimated to have cost impacts with a total potential savings of approximately $8,484,000, or 14.1% of the project's construction cost. Virginia Beach City Public Schools accepted cost reductions of approximately $6,000,000, or 10.0% of construction cost. The cost savings resulting from the workshop represented a return on investment (ROI) to the school system of 100:1.



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"While we are not required to perform value engineering exercises on our projects, we see these workshops as a tool to assist us in designing and constructing high-efficiency schools to support a modern educational program with high-performance building systems. The end result of these MBP-led workshops, and incorporation of the alternatives identified, are enhanced facilities from both a functional and financial perspective."

Tony Arnold, PE
Executive Director,
Facilities Services
Virginia Beach City
Public Schools

BENEFIT

- Identified potential construction cost reductions of 14.1%; accepted 10.0% in cost reductions
- ROI of VE workshop of 100:1
- Enhanced constructibility
- Enhanced operations of facility
- Reduced energy consumption
- Improved occupant experience
- Reduced maintenance costs (more durable components, and reduction of equipment units)
- Reduced risk for owner/operator

10% IN SAVINGS

ROI **100:1**