

FACILITY NEEDS ANALYSIS

A. Introduction

The EFMP provides guidelines to govern and manage the school system's construction efforts over a six-year period. These guidelines are intended to provide accountability to the community and assure conformance with a clearly defined approach to meeting the school system's educational facilities goals. However, situations may arise or conditions change during the six-year period that are sufficient to warrant revisions to the CIP. The capital plan is a fluid program in which projects can be accelerated or decelerated based on changing enrollment demographics, new state or local initiatives, or changes in the condition of a facility.

In addition to the "core" elements of capital improvement projects, the progress of previous projects, past funding analysis, and lessons learned are reviewed annually, as they have a dynamic impact on project logistics. These "core" elements are also on-going opportunities for learning ways to improve the project process. These steps include:

- Reviewing progress of on-going projects
- Analyzing funding availability and impact on the six-year capital plan
- Evaluating lessons learned from projects completed to date
- Analyzing interim housing opportunities
- Reviewing communication of the capital plan

B. Facility Guidelines

The Board receives information and recommendations from the review process, the goals, standards, policies, and guidelines, and the background data and inventory of facilities. The Board recognizes the following guidelines as being valid in the organization of this data into a facilities construction program.

- Relocatable facilities will be purchased only when conditions make it impossible to meet space needs through other means and to accommodate growth during the construction of new facilities.
- Determination of site location will give consideration to attendance area needs, safety factors, county growth patterns, suitability to educational program, compliance with federal and state regulations, conformity with health and engineering requirements, transportation distances, development costs, and acquisition costs.
- The Board supports the use of school facilities by community organizations and groups, as authorized by state law. The Board feels it has responsibility for insisting that:
 - Such activities shall not interfere with school activities
 - Adequate provisions shall be made for safeguarding school property
 - Additional operational costs incurred shall be included in the budget or otherwise provided

C. Capacity

A school should have space appropriate to deliver programs sufficiently varied to meet the needs of the students at a reasonable cost. Based on the year of construction, our current facilities' inventory includes schools with a range of capacities. It is imperative that site size and capacity needs are considered when calculating additional capacity to be constructed for a facility. New school facilities in St. Mary's County are designed in terms of the range of student capacities listed on the chart above. These ranges reflect the existing capacities of our facilities. Based on the age of our facilities, there is a wide range of capacities within our existing facilities.

<i>School Level</i>	<i>Range of Student Capacity</i>
<i>Elementary School</i>	<i>400 - 644</i>
<i>Middle School</i>	<i>790 - 1,060</i>
<i>High School</i>	<i>1,575 - 1,695</i>

The state-rated capacity is defined as the number of students that the IAC or its designee determines that an individual school has the physical capacity to enroll and can be reasonably accommodated in a facility. (Source: IAC Administrative Procedures Guide, September 2011)

Elementary school capacity is derived by multiplying the number of classrooms by the student/teacher ratio for each grade level and adding the totals. SMCPSS constructs and staffs elementary schools to a lower class size than the state, as detailed in the goals, standards, policies, and guidelines section. As of July 1, 2020, the state-rated capacity for our elementary schools will be 8,771 and the local will be 8,325, for a difference of 446 seats. There is no difference between state and local student/teacher ratios per classroom at the secondary level. The current middle school capacity is 4,147 seats in grades 6 - 8, with all four middle schools having been modernized and/or expanded. The current high school capacity is 5,085 and all three schools have been modernized and/or expanded. The Dr. James A. Forrest Career and Technology Center has also been modernized and expanded with a new capacity of 486. The Fairlead Academy I in Great Mills area continues to provide students with an alternate educational setting with a capacity of 152. The Fairlead Academy II in Leonardtown provides students with an alternative educational setting with a capacity of 81.

Prior to the design of Evergreen Elementary School, a committee reviewed and provided recommendations on the range of student capacity for the new school. The committee recommended that an elementary school building, with relocatables, should not exceed 719 students. For this reason, the committee recommended a state-rated building capacity of 644. This size allows for flexibility of grade changes and addresses the staffing required for programs such as art and music. Both Benjamin Banneker and Green Holly elementary schools function slightly different in terms of capacity based on the fact that these facilities are comprised of two buildings each and therefore have the capability of handling a slightly larger student body. At the time, school system staff completed a review of the school facility sizes based on other county data across the state. Based on the new elementary school capacity size of a 644 state-rated facility, St Mary's County ranked as the 3rd lowest of 16 schools with a capacity over 550. Our neighboring school systems, Charles and Calvert counties, had a high elementary school range of 724. Only seven of the 23 school systems (Cecil County did not report) that were reviewed have a high-range capacity of less than 550, with the majority of those school systems being on the Eastern Shore. The highest elementary school range was in Harford County at 1,026.

At the middle school level, St. Mary’s County ranked 10th lowest of 19 schools with a capacity over 700. Our neighboring counties, Charles County, utilized a high range of 890 and Calvert County utilized a high range of 1,400. Only five of the 24 school systems that were reviewed had a high-range capacity of less than 700, with the majority of those school systems being on the Eastern Shore. The highest middle school range was in Harford County at 1,656.

At the high school level, St. Mary’s County ranked 11th lowest of 15 schools with a capacity over 1,200. Our neighboring counties, Charles County, utilized a high range of 1,500 and Calvert County utilized a high range of 1,513. Only eight of the 23 school systems (Kent County did not report) that were reviewed had a high range capacity of less than 1,200, with the majority of those school systems being on the Eastern Shore. The highest high school range was in Montgomery County at 2,900.

These capacity guidelines were followed in the design of Captain Walter Francis Duke Elementary School in Leonardtown. Like Evergreen Elementary School, the state-rated capacity for Captain Walter Francis Duke Elementary School has been calculated to be 644.

D. Funding the CIP

The school system’s CIP is funded primarily through state and local funding. The school system has been successful in the past in obtaining federal grant funds, when available including QZAB.

Based on the new averaged state maximum yearly allocation of \$4.6 million for our school system, it will be necessary to span projects over several years. The net result will be a lack of adequate funding at the time of project bidding and fewer projects moving forward. This will lead to further delays of needed projects. The capital plan will remain fluid and balance all needs as can best be accomplished within fiscal constraints.

State-Local Cost Share Percentage

Year	State	Local
FY 2012	75%	25%
FY 2013	70%	30%
FY 2014	65%	35%
FY 2015	64%	36%
FY 2016	59%	41%
FY 2017	58%	42%
FY 2018	58%	42%
FY 2019	58%	42%
FY 2020	58%	42%
FY 2021	58%	42%
FY 2022	58%	42%

Every fiscal year, the CSMC sets the funding guidelines for the level of indebtedness it believes the county can afford. The guidelines are set following an analysis of fiscal considerations that shapes the county’s economic health, while balancing the need for educational programs and services. Under new state procedures implemented in FY 2020 the Interagency Commission on School Construction (IAC) is the approving authority for public school construction projects. These procedures call for approval of the school construction allocation by May 1st of each year. However, the FY 2020 cycle brought less funding approved than anticipated and changes to the cost share percentage after the CIP submissions were made and the FY 2021 cycle has many unknowns given the COVID-19 Pandemic. As always, changes are absorbed and communicated with the CSMC in an effort to meet their budgetary timelines.

The FY 2012 state participation for state eligible projects was 75% of the construction cost, which resulted in approximately a 50% state participation and a 50% local participation on the total project cost. Beginning in FY 2013, the state share has been reduced. The FY 2021 state share was 58% and it will remain at 58% for the FY 2022 state CIP cycle. The state-local

cost share percentage is calculated per the Code of Maryland Regulations (COMAR) and in the past included factors such as percentage of free and reduced meals (FARM) and the amount of the county's total outstanding school construction debt. The state does not pay for design, land acquisition, or moveable equipment. In addition, the state does not pay for federal mandates, such as projects to comply with the Clean Air Act, the AHERA, or Environmental Protection Agency (EPA) regulations. Under the new state law, the IAC is to update the state-local cost share formula every two years.

The school system will continue to work closely with the CSMC over the course of the current CIP to incorporate any changes at the state level and balance systemic needs with financial realities. The square foot cost of construction for FY 2021 was increased to \$329.00 per S.F. for construction cost and \$391.00 per S.F. for construction and site cost combined, representing a 3.44% increase over FY 2020 costs. It is not clear at this time what impact the COVID-19 Pandemic will have on construction costs and what adjustment may be made by the IAC for the FY 2022 CIP cycle. Cost data may be found in Appendix D Construction Planning Documents. As mentioned previously, based on the new process of funding projects over several years, the cost utilized at the time of project approval will not equal the actual cost at the time of project bid. This problem was recently experienced with the Park Hall and Hollywood Elementary School Roof and HVAC Systemic Renovation projects and will perpetuate in the future based on multi-year funding of state projects due to the annual allocation cap. Additionally, analysis of past projects indicates we experience higher construction costs due to location in relation to available contractors/equipment. It is also not clear at this time what legislation will become law and possibly impact the CIP process in the future.

E. Infrastructure Categories

State law requires that each county Board of Education "maintain throughout its county a reasonably uniform system of public schools that is designed to provide quality education and equal educational opportunity for all children." To address this issue, the school system approves a CIP including projects in the following categories:

Preventative Maintenance Projects

Timeline: Occupancy - Onward

This infrastructure category refers to, on a day-to-day basis, the ongoing upkeep of property and equipment that includes an annual physical assessment by the maintenance staff, as well as the repair and minor replacement activities necessary to support a safe, orderly, and healthy environment.

Preventative maintenance is provided to ensure that the building component or item of equipment will achieve its expected useful life. This effort begins with the existing equipment and continues until it is replaced or modernized; at which time the process is started again. Facilities receive regular operational care such as cleaning and maintenance of systems and finishes, lubricating, checking for proper operation, adjusting and aligning, and identifying items to be repaired, modified, or included in the CIP.

Routine maintenance restores items and components to their normal operating condition. Planned repairs are made while the component is still operational to avoid a breakdown. "Broken - fix-it" repairs may require immediate attention to prevent damage to other building or

equipment components. Repairs are initiated by maintenance staff, school staff requests, manufacturer's recommendations, and as identified during scheduled maintenance site assessments.

This work is accomplished by a team of electricians, plumbers, carpenters, heating mechanics, and general maintenance workers and is scheduled and directed by each maintenance trade. The program is staffed and funded through the operating budget of the Department of Maintenance.

Life cycle replacement of key infrastructure components is tracked within the CMP. These projects include:

- Roofing
- HVAC
- Paving
- Electrical
- Gym Floors
- Tracks/Tennis Courts
- Oil Tank Testing
- Painting (interior and exterior)
- Flooring
- Vehicle Replacement
- Bleacher Replacement
- Playgrounds
- Generator Replacement
- Athletic Amenities Replacement
- Fire Alarm Replacement

These projects are included in the appropriate operating or capital budget for funding. These life cycle checks are being expanded to include other facility components.

Renovation Projects

Timeline: 15 - 30 years

These projects include the design, construction, and equipping process through which a school facility and its systems are renewed and updated to meet county, state, and federal codes and requirements. An addition or major redesign of building spaces for program reasons is not included. These projects include, but are not limited to, the planned life-cycle asset replacement of major athletic components (tracks, gymnasium floors, etc), playgrounds, roof systems, HVAC systems, and window replacement systemic renovations.

Facilities are evaluated by school system staff and consultants; facilities are scheduled for system renovation. Major replacement projects are expected to extend the useful life of a facility and may reduce the overall needs of a 30-year old facility.

The program is funded through the CIP budget and reduces the impact on the operating budget because resources will not be applied to continuing, costly routine repairs to worn-out building components and equipment, and as a result there is increased energy and building efficiency.

Modernization Projects & Addition/Renovations

Timeline: 25+ years

These projects include the design, construction, and equipping process through which an aging school facility is brought up to current educational standards as established by the school system and through which its systems are renewed and updated to meet school, county, state, and federal codes and requirements. Modernization and renovation may require an addition or redesign of space to meet educational program requirements.

An in-depth analysis and evaluation of physical conditions and educational standards are reviewed along with current enrollment and long-term projections for all schools, both in the fall and spring of each year, by the DCP. In addition, the reports and recommendations of advisory boards are used in the analysis and evaluation process. The Superintendent will recommend and the Board will approve and request funding for modernization projects for the six-year CIP.

Individual State Initiatives

Timeline: As Approved by the Legislature

In FY 2012, the state legislature provided supplemental funding for school construction projects under an increased alcohol tax. These funds have been utilized to replace the lighting in all of the high school gymnasiums with energy efficient fixtures. The remaining funding under this initiative is being utilized to replace the gym lighting at Lexington Park Elementary School.

In FY 2013, the state legislature provided funding for the Energy Efficiency Initiative (EEI). This initiative provided the opportunity for Local Education Agencies (LEAs) to pursue funding for projects such as the installation of high efficiency lighting, solar panels, and the amendment of existing projects to incorporate energy efficient components. While SMCPs received approval for projects to replace exterior lighting with energy efficient LED fixtures at 23 schools, only six projects were able to be completed, with funding being reverted to the state for the remaining 17 projects. This initiative was difficult to implement based on the timeframe of approvals and the listing of approved products on the design light standard. Since the reversion, additional EEI projects have been completed via both QZAB and local funding.

In FY 2014, the state legislature passed initiatives to fund safety and security projects, as well as projects to complete air conditioning in facilities that do not have full air conditioning. Since SMCPs is fully air-conditioned, the focus was on safety and security projects. SMCPs was well prepared to identify and submit projects based on existing planning completed by the Department of Safety and Security. The mission of the department is to “enhance the safety and security of all schools, offices, and surrounding campuses through proactive action, initiatives, and programming.” This is supported by the vision statement of the department which is “The St. Mary’s County Public School system believes that one of our greatest responsibilities is to provide for the safety and security of students, staff, and visitors.” To this end, the department has developed a strategic plan and goals to achieve this vision. The projects completed under the Security Initiative (SI) support the goals under this plan. Under this initiative, five schools received security cameras, six schools received security communications, and nine schools received door hardware. Not all planned security projects were able to be funded under this initiative. Other funding sources, including QZAB, have been sought to complete the remaining projects. To date, nine additional security projects have been

completed under the QZAB program and two additional security projects under the ASP program, with five more underway.

In FY 2019 the School Safety Grant Program (SSGP) was established as part of the implementation of the Maryland Safe to Learn Act of 2018. SMCPs has received funding for fifteen projects to date. These include access control systems, window safety film application, surveillance technology, and a security vestibule. A portion of the FY 2020 SSGP funding was transferred to the Maryland Center for School Safety and the remaining funds are being combined with FY 2021 funding, with applications anticipated to be available during the summer of 2020. SMCPs will continue to utilize these funds in combination with local CIP funds to complete various safety and security related projects throughout the school system.

In FY 2020 the Healthy School Facilities Fund (HSFF) was established to implement SB 611 which was approved in 2018 to provide funding to local school systems to improve environmental health in school facilities. This legislation was modified in 2019 by HB 1253 to include the remediation of lead in drinking water as one of the funding priorities. The HSFF has been funded for FY 2020 and FY 2021 at this time. SMCPs submitted project applications for ACM removal for FY 2020 but unfortunately these projects were lower in the funding priorities and did not receive approval. SMCPs will continue to submit eligible projects under this program in the future.

SMCPs maintains an extensive database of facilities and systems within the CMP, as well as by department, and will utilize that information to formulate appropriate project requests under any additional new state funding initiatives in the future.

Local Capital Projects

Timeline: Ongoing to Meet the Need

Local capital projects are specific projects to restore and/or improve school environments for students, staff, and the community, which are not eligible for state funds. Recent examples are modifications for handicap accessibility, space modifications to accommodate new or expanded programs, asphalt resurfacing, parking lot modifications, and public address systems. These are renovation-type projects that provide minor modifications to a facility to restore/continue its physical and educational functionality. These capital projects are not intended primarily to lengthen the life of the facility and probably will not lessen the needs of the facilities in the 25+ year old range. These projects are identified by the DCP, annual school requests, and county, state, and federal codes and regulations and are funded through the CIP. These types of project are categorized under the local CIP as building infrastructure critical and building infrastructure programmatic.

F. CIP Summary

The official enrollment on September 30, 2019 was 18,083 students in grades PS – 12th. This was an increase of 84 students from the previous year. The projection for September 30, 2020 is for an additional 107 students in grades K-12th. Both SMCPs and MDP calculate projections based on K-12th enrollment because PreK and Preschool Special Education are program eligibility based. The PreK and Preschool Special Education figures are added as a result of the official



September 30th enrollment. The spring ten year enrollment projections have an average deviation of (2.32%) from the MDP projections.

School Year	Actual and Projected PreK-12 Enrollment	Projected Growth %
2015-16	17,695	0.58%
2016-17	17,791	0.54%
2017-18	17,790	-0.01%
2018-19	17,712	-0.44%
2019-20	17,805	0.53%
2020-21	17,965	0.90%
2021-22	18,146	1.01%
2022-23	18,194	0.26%
2023-24	18,239	0.25%
2024-25	18,316	0.42%
2025-26	18,321	0.03%
2026-27	18,369	0.26%
2027-28	18,464	0.52%
2028-29	18,541	0.42%
2029-30	18,573	0.17%

The projected enrollment for school year 2020-21 is for 17,965 students in grades PreK-12th. The rate of increased elementary school enrollment that we have experienced since the late 1990's has declined over the past several years and in FY 2018 experienced the first decline in enrollment. For the next six years the elementary school enrollment is projected to increase by 282 students. There is a projected six year decrease of 140 students at the middle school level an increase of 321 students at the high school level.

The IAC requires that 50% of the student population be in place when requesting planning approval for projects that are requesting additional capacity. In addition, they require that the enrollment projections indicate that at completion of the facility, the school will be nearing full capacity. This ensures that

dollars are utilized to construct seats that are needed immediately following the opening versus building for students that might come in the future. This ensures that funds are used to satisfy current needs across the state. Since the State provides 58% (thru FY 2022) of the construction funding, it is imperative that we work collaboratively to find a construction schedule that meets the needs of the school system, while being fiscally responsible.

Based on the current enrollment projections, future growth has slowed and there is insufficient capacity needs to warrant new school construction or additions to existing schools. For this reason, the new elementary school and secondary capacity projects have been deferred beyond the six-year capital plan. Staff will continue to monitor the demographics over the next several years and if required, new capacity projects will be introduced into the capital plan. A locally funded K-12 capacity study will be completed in FY 2021 to determine all of the options of meeting the short and long term capacity needs of the school system. In the interim, existing capacity shortfalls will be addressed through the use of relocatable classroom units.

Please see Appendix B Charts and Graphs for an analysis of enrollment projections versus rated capacity by school level.

Existing Infrastructure

The school system embarked on an aggressive capital improvements program in the 1990's to renovate the existing facilities and to add additions to facilities to maximize state funding. This was a successful program and the majority of the school system infrastructure was updated and renovated during that time. Many of the life cycle replacements for these projects are coming due over the next ten years, including Roof and HVAC systemic projects, paving, and flooring replacement.

With the deferral of all capacity projects, the CIP has been amended to address the life cycle replacement of major system components including:

- FY 2022 Mechanicsville E.S. – Modernization (interior)
- FY 2023 Town Creek E.S. – HVAC Systemic Renovation
- FY 2023 Lettie Marshall Dent E.S. – Modernization (HVAC/Electric/Tank/Partial Roof)
- FY 2024 Great Mills H.S. – Partial Roof Replacement (125,652 sf)
- FY 2024 Piney Point E.S. – HVAC Systemic Renovation
- FY 2025 Green Holly E.S. – HVAC Systemic Renovation (Bldg. B) & Roof Systemic Renovation (Bldg. A) and Partial (Bldg. B)
- FY 2026 Chopticon H.S. – HVAC Systemic Renovation

State funds through the ASP and other programs/initiatives will also be utilized as available to complete infrastructure improvements.

G. FY 2022 – FY 2027 State Eligible Project Descriptions

Mechanicsville Elementary School

Modernization

This project will address key components including asbestos abatement, electrical upgrade, ceiling, flooring, fire alarm, public address system, and windows. This building was constructed in 1951 and had additions in 1960 and 1979. The roof and HVAC components have been addressed through previous capital projects. Local funds were provided in FY 2020 for completion of a study to assist with the development of the project scope in advance of the project.

Town Creek Elementary School

HVAC Systemic Renovation

This project will replace the HVAC system which was installed in 1999. Maintenance monitors the HVAC system and provides repairs on an as-needed basis, pending the replacement. Local funds are being requested in FY 2021 for completion of a study and partial design in advance of the project.

Lettie Marshall Dent Elementary School

Modernization

This project will replace the HVAC system which was installed in 1992, along with lighting and communication system upgrades. Flooring and fixtures will be replaced with local funds. A transfer switch will be installed that will allow for large roll-off generators to power essential portions of the building. The existing underground fuel tank will be replaced. Maintenance monitors the HVAC system and provides repairs on an as-needed basis, pending the replacement. Local funds are being requested in FY 2021 for completion of a study and partial design in advance of the project.

Great Mills High School

Partial Roof Replacement

This project will replace approximately 125,652 square feet of existing bituminous roof that is failing. This project does not include the area (90,982) of the partial roof replacement project funded in FY 2019/FY 2020. This area of the roof was last replaced in 1997 as part of the addition/renovation project and will be 27 years old at the time of replacement. Maintenance monitors the roof and provides repairs on an as-needed basis, pending the roof replacement. Local funds are being requested in FY 2021 for completion of a study and partial design in advance of the project.

Piney Point Elementary School

HVAC Systemic Renovation

This project is for the replacement of the HVAC system for the building, last updated in 1993. At the time of completion of the project, the system will be 30 years old. Maintenance monitors the system and provides repairs on an as-needed basis pending the replacement. Local funds are being requested in FY 2022 for completion of a study and partial design in advance of the project.

Green Holly Elementary School

HVAC Systemic Renovation (Bldg. B) &

Roof Systemic Renovation (Bldg. A) and Partial (Bldg. B)

This project will replace 46,450 square feet of existing bituminous roof on Building A that is failing and 6,185 square feet of existing bituminous roof on Building B that is failing. This project does not include the area (51,740 square feet) of Building B that was funded for replacement in FY 2019/FY 2020. The Building A roof was last replaced in 1992 and will be 33 years old at the time of replacement. The subject portion of the Building B roof was last replaced in 1999 and at the time of completion will be 26 years old. The project also includes the replacement of the HVAC system for Building B, which was last replaced in 1992. At the time of completion of the project, the system will be 32 years old. Maintenance monitors the roof and HVAC system and provides repairs on an as-needed basis, pending the replacements. Local funds are being requested in FY 2023 for completion of a study and partial design in advance of the project.

Chopticon High School

HVAC Systemic Renovation

This project is for the replacement of the HVAC system for the building, last updated in 2000. At the time of completion of the project, the system will be 26 years old. Maintenance monitors the system and provides repairs on an as-needed basis, pending the replacement. Local funds are being requested in FY 2024 for completion of a study in advance of the project.