

Department of Legislative Services
Maryland General Assembly
2018 Session

FISCAL AND POLICY NOTE
First Reader

Senate Bill 483 (Senator King)
Education, Health, and Environmental Affairs

Public Schools - Sprinkler Systems - Required

This bill requires that sprinkler systems be installed in all public school buildings. Current standards and requirements for the installation of sprinkler systems in residential facilities may apply to the installation of sprinkler systems in public schools.

Fiscal Summary

State Effect: No effect on total State spending for public school construction, which is established annually by the Governor and General Assembly through the capital budget process. No effect on revenues.

Local Effect: Local expenditures increase by approximately \$495 million in FY 2019 to retrofit an estimated 330 public school facilities that do not have any sprinkler systems. State funding in FY 2019 is not available for this purpose, as explained below. To the extent that retrofitting of schools extends beyond the bill's October 2018 effective date, State funding may be available beginning in FY 2020. **This bill imposes a mandate on a unit of local government.**

Small Business Effect: Meaningful for small businesses that install sprinkler systems in school buildings.

Analysis

Current Law: A description of State support for public school construction projects is included in the **Appendix – State Funding for Public School Construction Projects.**

The 2015 International Building Code (IBC), which is incorporated by reference in State regulations governing construction of public school facilities, requires the installation of

sprinkler systems in any *new* educational facility greater than 12,000 square feet, subject to an exception for classrooms with exterior exit doors. Similar requirements have been in the IBC since its inception in 1997.

A “sprinkler system” is defined as a device that:

- opens automatically by operation of a heat responsive releasing mechanism;
- discharges water in a specific pattern over a designated area to extinguish or control fire; and
- uses the same service water supply pipe to the dwelling unit that the public water system uses.

Sprinkler systems must be installed in each:

- newly constructed dormitory, hotel, lodging, rooming house, or multifamily residential dwelling for which the building permit was issued or construction began on or after July 1, 1990; and
- newly constructed town house for which the building permit was issued or construction began on or after July 1, 1992.

Each sprinkler system must be installed in accordance with engineering practices that meet the standard for the installation of sprinkler systems in residential occupancies under the regulations of the State Fire Prevention Commission or the local authority that enforces fire and building codes. It must also meet the requirements of the current National Fire Protection Association standards and be approved by the State Fire Marshal or the local authority that enforces fire codes.

Background: There are approximately 1,400 public schools in the State, but neither the Maryland State Department of Education nor the Interagency Committee on School Construction (IAC) have a record of the number of school buildings that do not have sprinkler systems. However, the Maryland Association of Boards of Education (MABE) offers an insurance program to its members, and 17 school systems in the State participate in the program. MABE advises that 166 of the 676 (25%) buildings in its insurance program do not have sprinklers. Two additional local school systems that do not participate in the MABE insurance program also provided data: Baltimore City reports 62 of its 161 buildings (38.5%) do not have sprinklers; and Montgomery County advises that it has 9 school buildings and 4 holding facilities that do not have sprinkler systems.

Based on this information, the Department of Legislative Services (DLS) estimates that approximately 330 school buildings in the State do not have any sprinkler systems installed. This estimate assumes that 25% of school buildings outside of Baltimore City

and Montgomery County do not have sprinklers, plus a total of 75 buildings in Baltimore City and Montgomery County.

According to the U.S. Fire Administration, deaths and injuries from fires in educational buildings are rare. Since 2003, fewer than three people each year have died from fires in educational buildings, except for 2007, when there were five deaths. Over the same time period, injuries have ranged from 50 to 125. Annual property losses from fires in educational buildings since 2003 have ranged from \$41.0 million to \$149.6 million.

State/Local Fiscal Effect: The bill requires that all public school buildings, including existing facilities, have sprinkler systems installed by October 2018. As new buildings currently under construction are already required to have sprinkler systems by the IBC, the bill affects an estimated 330 existing structures that lack sprinklers.

IAC advises that the average cost of retrofitting an existing school building with a sprinkler system is about \$11.55 per square foot, with costs ranging from \$7-\$15 per square foot depending on the condition of the building. *For illustrative purposes*, the cost of retrofitting a 90,000 square foot elementary school would be \$1.0 million, and for a 200,000 square foot high school, the cost is \$2.3 million. Assuming an average of \$1.5 million for each school, given a mixture of elementary and secondary schools, the estimated total cost of retrofitting 330 schools is \$495 million.

DLS notes that retrofitting all affected buildings by the bill's effective date is *not feasible* due to the volume of work to be completed and the time required to develop the design and technical specifications for the work and procure contractors to complete the work. In addition, the deadline for applying for State funding from IAC for fiscal 2019 has passed. Local school systems are, therefore, responsible for paying for the necessary retrofits and they bear the full cost in fiscal 2019. To the extent that work to retrofit existing buildings continues beyond the bill's effective date, State funding from IAC may be available beginning in fiscal 2020. However, since State funding for school construction is fixed each year through the capital budget process, any funding dedicated to retrofitting existing schools will not be available for other school construction needs.

Small Business Effect: Given the large number of retrofit projects that must be carried out, engineering and construction companies with expertise in retrofitting existing buildings with sprinkler systems will experience a rapid and sizable increase in demand for their services from local school systems.

Additional Information

Prior Introductions: None.

Cross File: HB 226 (Delegate Ebersole, *et al.*) - Appropriations.

Information Source(s): Dorchester and Montgomery counties; Baltimore City; Maryland Association of Boards of Education; U.S. Fire Administration; Maryland State Department of Education; Public School Construction Program; Department of Legislative Services

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Appendix – State Funding for Public School Construction

School Construction Review and Approval Process

Subject to the final approval of the Board of Public Works (BPW), the Interagency Committee on School Construction (IAC) manages State review and approval of local school construction projects. Each year, local systems develop and submit to IAC a facilities master plan that includes an analysis of future school facility needs based on the current condition of school buildings and projected enrollment. The master plan must be approved by the local school board. Subsequently, each local school system submits a capital improvement plan to IAC that includes projects for which it seeks planning and/or funding approval for the upcoming fiscal year, which may include projects that the local system has forward funded. In addition to approval from the local school board, the request for the upcoming fiscal year must be approved by the county's governing body. Typically, the submission letter to IAC contains signatures of both the school board president and either the county executive and county council president or chair of the board of county commissioners.

Based on its assessment of the relative merit of all the project proposals it receives, and subject to the projected level of school construction funds available, IAC makes recommendations to BPW on which projects to fund. By December 31 of each year, IAC must recommend to BPW projects comprising 75% of the preliminary school construction allocation projected to be available by the Governor for the upcoming fiscal year. Local school boards may then appeal the IAC recommendations directly to BPW. By March 1 of each year, IAC must recommend to BPW and the General Assembly projects comprising 90% of the allocation for school construction submitted in the Governor's capital budget. Following the legislative session, IAC recommends projects comprising the remaining school construction funds included in the enacted capital budget for BPW approval, no earlier than May 1.

Eligible School Construction Costs

IAC establishes a range of appropriate per student, square foot allocations for elementary, middle, and high schools as well as for special education students, career and technology students, and specialized programs. IAC also establishes, on an annual basis, a *cost per square foot* that is applicable to major school construction projects. For fiscal 2019, the cost per square foot is \$302 for new construction *without* site development (up from \$293 in fiscal 2018) and \$360 for new construction *with* site development (up from \$348.67 in fiscal 2018). In general, multiplying the cost per square foot allocation by the allowable square feet (based primarily on the State-rated capacity of a building) yields the maximum allowable cost that is subject to the State/local cost-share formula.

The cost of acquiring land may not be considered an eligible construction cost and may not be paid by the State. Otherwise, BPW regulations specify public school construction-related costs that are eligible and ineligible for State funding. In general, the following costs are included among eligible expenses:

- construction of a new facility, a renovation of a new facility, an addition to an existing facility, or a replacement of an existing building or building portion (*i.e.*, “bricks and mortar”);
- building and site development;
- modular construction that meets specified standards;
- State-owned relocatable facilities and temporary facilities that are required to be on site during construction; and
- built-in equipment and furnishings.

Beginning in fiscal 2018, BPW approved the use of State funding for window air-conditioning units and associated electrical upgrades, installation, and security in schools where more than one-half of the classrooms are not temperature controlled.

Among the major items that explicitly are *not* eligible for State funding (besides site acquisition) are (1) architectural, engineering, and other consulting fees; (2) master plans and feasibility studies; (3) projects or systemic renovations for buildings and systems that have been replaced, upgraded, or renovated within the last 15 years; and (4) movable equipment and furnishings.

State Share of Eligible Costs

The State pays at least 50% of eligible costs of school construction and renovation projects, based on a funding formula that takes into account numerous factors including each local school system’s wealth and ability to pay. The Public School Facilities Act (Chapters 306 and 307 of 2004) requires that the cost-share formula be recalculated every three years. The first recalculation occurred in 2007, the second recalculation occurred in 2010, and the third was completed in 2014. The most recent recalculation was completed in 2017. IAC recommended updating the formula for the next three years, but BPW approved new cost shares *only* for fiscal 2019, which held harmless several jurisdictions that otherwise would have experienced a decrease in State support based on the 2017 recalculation of the formula. **Exhibit 1** shows the State share of eligible school construction costs for all Maryland jurisdictions for fiscal 2017 through 2019, as approved by BPW.

Exhibit 1
State Share of Eligible School Construction Costs
Fiscal 2017-2019

County	FY 2017	FY 2018	FY 2019
Allegany	83%	83%	85%
Anne Arundel	50%	50%	50%
Baltimore City	93%	93%	93%
Baltimore	52%	52%	56%
Calvert	53%	53%	53%
Caroline	80%	80%	81%
Carroll	59%	59%	59%
Cecil	63%	63%	66%
Charles	61%	61%	61%
Dorchester	76%	76%	76%
Frederick	64%	64%	64%
Garrett	50%	50%	50%
Harford	63%	63%	63%
Howard	55%	55%	55%
Kent	50%	50%	50%
Montgomery	50%	50%	50%
Prince George's	63%	63%	70%
Queen Anne's	50%	50%	51%
St. Mary's	58%	58%	58%
Somerset	100%	100%	100%
Talbot	50%	50%	50%
Washington	71%	71%	71%
Wicomico	97%	97%	97%
Worcester	50%	50%	50%
MD School for the Blind	93%	93%	93%

Source: Interagency Committee on School Construction

Chapters 306 and 307 also established the State's intent to provide \$2.0 billion of funding for school construction by fiscal 2013, an average of \$250.0 million each year for eight years. The State achieved the \$2.0 billion target ahead of schedule, and Public School Construction Program (PSCP) funding has remained above the \$250.0 million target each year since. **Exhibit 2** shows annual State public school construction funding from fiscal 2010 through 2018, by county.

The Governor's proposed fiscal 2019 budget includes \$309.0 million in general obligation (GO) bonds and \$4.9 million in general funds for PSCP and an additional \$40.0 million in GO bonds for a supplemental grant program for school systems that have high enrollment growth or a large number of relocatable classrooms, as established by statute. The fiscal 2019 *Capital Improvement Program* includes \$280.0 million annually for PSCP in fiscal 2020 through 2023 and \$40.0 million annually for the supplemental grant program.

Exhibit 2
State Public School Construction Funding
Fiscal 2010-2018
(\$ in Thousands)

County	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY2015	FY 2016	FY 2017	FY 2018
Allegany	\$0	842	\$727	\$1,999	\$2,496	\$6,597	\$10,837	\$24,242	12,873
Anne Arundel	25,020	26,200	32,400	33,349	34,870	36,200	39,419	42,598	36,829
Baltimore City	27,733	28,559	41,000	46,102	39,478	35,329	36,788	37,500	37,303
Baltimore	28,000	29,000	39,000	47,394	52,068	34,561	42,177	45,775	45,186
Calvert	8,181	8,450	7,317	7,129	5,577	2,653	1,500	9,964	14,575
Caroline	6,000	3,767	235	756	7,788	0	2,902	36	1,646
Carroll	10,520	8,444	9,079	15,211	4,874	3,915	6,415	3,418	3,853
Cecil	1,538	1,744	2,830	1,915	1,268	8,194	4,723	6,650	6,730
Charles	8,898	8,335	9,180	12,480	9,426	8,200	12,817	8,951	10,516
Dorchester	6,469	5,436	3,639	979	1,590	768	179	5,009	10,975
Frederick	16,226	14,000	16,532	19,254	20,163	15,901	21,000	21,295	19,564
Garrett	666	0	382	319	134	0	0	0	1,567
Harford	16,253	13,835	17,040	16,573	13,214	12,791	9,309	8,732	13,592
Howard	18,262	18,290	26,936	32,811	25,931	20,772	27,820	31,206	21,066
Kent	388	0	104	123	95	817	615	0	0
Montgomery	28,350	30,183	42,000	43,794	38,592	39,950	45,708	50,128	59,194
Prince George's	28,200	29,500	40,348	42,192	39,371	38,539	41,729	44,675	49,625
Queen Anne's	3,947	5,750	5,374	649	4,371	5,112	0	249	2,455
St. Mary's	4,028	6,600	3,354	3,172	7,472	11,876	7,015	1,273	815
Somerset	6,000	6,000	3,371	289	3,811	2,752	2,222	1,771	14,720
Talbot	436	344	135	35	634	0	308	0	0
Washington	7,965	7,970	8,571	9,117	8,494	7,467	8,404	4,847	2,592
Wicomico	13,170	9,975	1,864	11,290	13,327	10,991	7,440	10,373	11,847
Worcester	403	0	165	166	4,882	0	72	0	0
MD School for the Blind				2,800	6,063	14,733	8,616	6,000	9,376
Statewide		500		100	500	660	175	300	500
Total	\$266,653	\$263,724	\$311,583	\$349,997	\$347,277	\$318,778	\$338,190	\$364,992	\$387,399
Amount Over \$250M	\$16,653	\$13,724	\$61,583	\$99,997	\$97,277	\$68,778	\$88,190	\$114,992	\$137,399

Note: Includes new general obligation bonds, pay-as-you-go funds, and reallocated funds that were previously authorized. Counties receiving \$0 did not request any eligible projects to be funded in that year. Fiscal 2016-2018 include funds allocated for the Enrollment Growth and Relocatable Classroom program totaling \$20 million in fiscal 2016, \$40 million in fiscal 2017, and \$62.5 million in fiscal 2018. Fiscal 2017 total for Baltimore County includes \$5 million withheld by the Board of Public Works and later reauthorized by the General Assembly in fiscal 2018.

Source: Interagency Committee on School Construction; Department of Legislative Services