

HOWARD COUNTY PUBLIC SCHOOL SYSTEM

# Capital Budget FY 2022



**Capital Improvement Program FY 2023–2027**  
**Long-Range Master Plan FY 2022–2031**

**Superintendent's Proposed Budget**



Superintendent's Proposed FY 2022 Capital Budget  
Capital Improvement Program FY 2023–2027  
Long-Range Master Plan FY 2022–2031

Superintendent

Michael J. Martirano, Ed.D.

Board of Education

*Elected Officials*

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Vicky Cutroneo, Vice Chair  
Kirsten A. Coombs  
Christina Delmont-Small  
Jennifer Swickard Mallo  
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*Student Member*

Zachary Koung

September 2020

**Superintendent's Proposed FY 2022 Capital Budget  
Capital Improvement Program FY 2023–2027  
Long-Range Master Plan FY 2022–2031**

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*This is a publication of the Howard County Public School System.*

Electronic copy of the Capital Budget can be  
found on the school system's website at [www.hcpss.org](http://www.hcpss.org).



# Howard County Public School System

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Superintendent's Proposed FY 2022 Capital Budget  
Capital Improvement Program FY 2023–2027  
Long-Range Master Plan FY 2022–2031

Section 1

# Executive Summary

September 2020





## Introduction

This document contains the Howard County Public School System's (HCPSS) Superintendent's Proposed FY 2022 Capital Budget and the FY 2023–2027 Capital Improvement Program (CIP) schedules. Projects are presented for the next fiscal year and future years, documenting long-range plans for the system.

The capital budget process, detailed within the Executive Summary, links capital planning with attendance area planning and addresses long-range planning issues identified in the annual Feasibility Study. Presented to the Board of Education on June 11 the 2020 Feasibility Study provided new enrollment projections and possible future boundary scenarios. This year's capital improvement program provides for student capacity, renovations, and various other improvements that staff, parents, and community leaders have identified as needed. Several factors affect the total FY 2022 Capital Budget. The formula used by the state to calculate school construction costs has increased to \$406 per square foot. Project budgets continue to increase

to reflect rising costs such as the requirement to pay prevailing wages on all projects after July 1, 2014, costs to comply with LEED, and inflation.

The Superintendent's Proposed Capital Budget is the first step in this annual process, which will ultimately end with the Board of Education's Approved Capital Budget in May 2021. The capital budget is submitted much earlier than the operating budget to accommodate deadlines associated with submission of the State capital budget to the Interagency Commission on School Construction.

**Executive Summary** provides an introduction to the Board's Proposed FY 2022 Capital Budget, the Capital Improvement Program FY 2023–2027, and the Long-Range Master Plan FY 2022–2031. It presents a high level overview of the budget process and the FY 2022 Proposed Capital Budget. Included in the Executive Summary is the Superintendent's Message, which provides an overview of the budget issues. Other information found in the Executive Summary is enrollment projections and student capacities, the capital budget schedule, and information on the capital budget process.

**System Information** presents information on the school system with a map of school locations throughout the county.

**Project Detail** presents detail on each project presented in the proposed FY 2022 Capital Budget as well as information on long range projects.

**Supporting Data** includes data from the annual Feasibility Study, detailed enrollment data, school and region tests for Adequate Public Facilities Ordinance (APFO), and facilities constructed and/or renovated with state funds.



## Message from the Superintendent

Dear Howard County community,

The Proposed FY 2022 Capital Budget, FY 2023-2027 Capital Improvement Program and FY 2022-2031 Long-Range Master Plan for the Howard County Public School System provide a framework for school system facilities that give all students and staff equitable opportunities to learn and achieve.



Our Capital Budget planning is intrinsically linked with our Operating Budget and redistricting processes and our plan for eliminating the Health Fund deficit, which all work together toward fulfilling the goals and priorities of our Strategic Call to Action: Learning and Leading with Equity. The Capital Budget adds improvements and capacity where they are most urgently needed to relieve crowded schools and ensure the equitable allocation of instructional resources. It provides for the facilities that are essential to allow consistent delivery of high quality instructional programming in every Howard County school, in a learning environment where every student is nurtured and fully supported in their learning and growth. It reflects the priorities of our school system and our community for maintaining excellence in instruction by leading with equity and closing opportunity gaps.

The \$108 million FY 2022 Proposed Capital Budget requests the funds needed to continue progress on our three major capital project priorities. The \$364 million Capital Improvement Program and \$822 million Long-Range Master Plan for FY 2022-2031 address existing and projected student capacity and facility needs to support our system's projected growth of 5,800 additional students between 2021 and 2031.

### **FY 2022 Capital Budget Highlights**

- Talbott Springs Elementary School Replacement, scheduled for opening in September 2022
- New High School #13, scheduled for opening in September 2023
- Hammond High School Renovation/Addition, scheduled for opening in September 2023
- Systemic renovations of boilers and other equipment

### **FY 2022-2031 Long-Range Master Plan Highlights**

- Provides for the addition of 4,000 seats
- \$251 million in systemic renovations for modernization and major programmatic renovations to existing school facilities
- Renovations to address deferred maintenance and additions to add needed seats at current middle school facilities



## Message from the Superintendent

Rising costs and continued increasing enrollment have led to school system capital needs that will require an increase to historical funding levels by the county and state. We know that resources are limited and there are many competing needs. We have continued to advocate for our capital needs at the state and local level, and are committed to working collaboratively with our state and county partners to secure the funding that is necessary to fund the proposed budget. Through our ongoing partnerships, we can continue to successfully advance our vision of equity and support for instructional growth.

The presentation of my recommended budget to the Board begins the capital budget process for Howard County. On September 24, 2020 the Board is scheduled to approve the capital budget proposal, which will then be submitted to the Howard County Planning Board and County Council for consideration. Next, project requests are submitted to the Maryland Interagency Commission on School Construction. On February 11, 2021, the Board will adopt its budget request, which will then be submitted to the County Executive. In May 2021, the County Council will adopt the Howard County Capital Budget, and the Board will adopt the final Capital Budget on May 27, 2021. The FY 2022 Capital Budget schedule is detailed at the end of the Executive Summary and includes the dates of Board public hearings and work sessions.

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Martirano", written in a cursive style.

Michael J. Martirano, Ed.D.  
Superintendent

# HCPSS Strategic Call to Action

## HCPSS Strategic Call to Action



# Learning and Leading with Equity

## *The Fierce Urgency of Now*

### Vision

Every student and staff member embraces diversity and possesses the skills, knowledge and confidence to positively influence the larger community.



### Mission

HCPSS ensures academic success and social-emotional well-being for each student in an inclusive and nurturing environment that closes opportunity gaps.

## Four Overarching Commitments

### VALUE

Every HCPSS stakeholder feels happy and rewarded in their roles and takes pride in cultivating the learning community.

### ACHIEVE

An individualized focus supports every person in reaching milestones for success.

### CONNECT

Students and staff thrive in a safe, nurturing and inclusive culture that embraces diversity.

### EMPOWER

Schools, families and the community are mutually invested in student achievement and well-being.

## Desired Outcomes

- **Equity** and **relationships** are at the foundation of all decisions and actions.
- Students' **social-emotional learning** is nurtured through life skills development and collaborative dialogue, such as **restorative practices** to solve problems.
- **Graduation rates** among all high schools and each demographic group are at exemplary levels.
- Students graduate with the skills, attributes and knowledge necessary to acquire **meaningful and rewarding employment** in a dynamic international workplace.
- All students have equitable opportunities to earn **college credit or industry certification**.
- Through collaboration with families and the greater community, all students enter kindergarten **ready to learn**.
- Each and every student receives a high-quality education through **individualized** instruction, challenges, supports and opportunities.
- High quality **special education** services are delivered in a consistent and collaborative manner.
- **Curriculum** is based on standards and best practices, implemented with fidelity, and aligned with meaningful **assessments** that provide actionable data for instructional planning.
- Students see **diversity and inclusion** reflected in the curriculum, and respect the contributions of all populations.
- Staff reflect the **diversity** of the student and community population.
- Parents, guardians and community members **trust** in the integrity of the school system and are active and valued **partners**.
- All staff feel **valued**, are effective in their roles, and have equitable access to additional opportunities through **professional learning** and leadership development.
- Organizational **culture and climate** are supportive and nurturing, and provide a **safe** and healthy environment for all.
- All operations and practices are **responsive**, accountable, efficient and **student-centered**.

HOWARD COUNTY PUBLIC SCHOOL SYSTEM

# FY 2022 Capital Budget

Superintendent Proposed

September 10, 2020

(In Thousands)

Capacity	Project	County Project	Occupancy	Approved Appropriations	Local Bonds	Codes	Total FY22 Request	Requested Project Totals Through FY22
540	Talbott Springs ES Replacement	E1043	Sept 2022	\$ 38,377	\$ 5,090	(C)	\$ 5,090	\$ 43,467
1,658	New HS #13	E1035	Sept 2023	54,986	42,699	(C)	42,699	97,685
200	Hammond HS Renovation/Addition	E1024	Sept 2023	38,006	29,058	(C)	29,058	67,064
	Systemic Renovations/Modernizations	E1044		58,134	19,565	(P,C,E)	19,565	77,699
	Roofing Projects	E1046		17,997	5,000	(P,C,E)	5,000	22,997
	Playground Equipment	E0990		3,180	250	(E)	250	3,430
	Relocatable Classrooms	E1045		6,500	1,500	(P,C,E)	1,500	8,000
	Site Acquisition & Construction Reserve	E1047		-	-	(P,C)	-	-
	Technology	E1048		7,500	3,750	(C,E)	3,750	11,250
	School Parking Lot Expansions	E1012		4,200	600	(P,C,E)	600	4,800
	Planning and Design	E1038		1,100	300	(P)	300	1,400
	Barrier Free	E0989		5,953	200	(P,C,E)	200	6,153
	<b>TOTALS</b>			<b>\$ 235,933</b>	<b>\$ 108,012</b>		<b>\$ 108,012</b>	<b>\$ 343,945</b>

(P) Planning

(C) Construction

(E) Equipment

# FY 2023-2027 Capital Improvement Program

Superintendent Proposed

September 10, 2020

(In Thousands)

Grades	Capacity	Project	County Project	Occupancy	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	5 Year CIP Total
9-12	1,658	New HS #13	E1035	Sept 2023	\$ 25,357	\$ 6,955	\$ -	\$ -	\$ -	\$ 32,312
9-12	200	Hammond HS Renovation/Addition	E1024	Sept 2023	28,490	11,000	-	-	-	39,490
6-8	195	Dunloggin MS Renovation/Addition	E1049	Sept 2027	-	3,557	9,555	14,077	14,418	41,607
K-5	788	New ES #43	E1039	Sept 2028	-	-	7,065	17,500	17,000	41,565
6-8	292	Oakland Mills MS Renovation/Addition	E1036	Sept 2030	-	-	-	-	5,479	5,479
9-12	340	Centennial HS Renovation/Addition	E1025	Sept 2031	-	-	-	-	-	-
		Systemic Renovations/Modernizations	E1044		30,051	31,326	26,092	23,908	26,226	137,603
		Roofing Projects	E1046		1,000	1,000	5,000	5,000	5,000	17,000
		Playground Equipment	E0990		250	250	500	500	500	2,000
		Relocatable Classrooms	E1045		1,500	1,500	1,500	1,500	1,500	7,500
		Site Acquisition & Construction Reserve	E1047		-	-	-	-	2,000	2,000
		Technology	E1048		5,500	5,500	7,500	7,500	5,500	31,500
		School Parking Lot Expansions	E1012		600	600	600	600	600	3,000
		Planning and Design	E1038		300	300	300	300	300	1,500
		Barrier Free	E0989		200	200	200	200	200	1,000
		<b>TOTALS</b>			<b>\$ 93,248</b>	<b>\$ 62,188</b>	<b>\$ 58,312</b>	<b>\$ 71,085</b>	<b>\$ 78,723</b>	<b>\$ 363,556</b>



# FY 2022-2027 Long-Range Systemic Renovation Projects

Superintendent Proposed

September 10, 2020

(In Thousands)

Project	FY 2022 Local	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	Totals
Applications and Research Lab Maintenance	\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,000	\$ 1,000	\$ 1,000	\$ 7,500
West Friendship ES MBR/Well	1,000	3,000	2,650	-	-	-	6,650
Bonnie Branch MS Boiler Replacement	600	-	-	-	-	-	600
Grounds/Fleet Infrastructure Capital Needs	1,665	736	645	544	543	543	4,676
HCPSS portion of Artificial Turf Replacement	300	315	331	348	365	383	2,042
Guilford ES Exterior Windows/Doors	-	1,300	-	-	-	-	1,300
Manor Woods ES Waste Water Treatment Plant	-	3,000	3,000	-	-	-	6,000
Jeffers Hill ES Boiler Replacement	-	600	-	-	-	-	600
Manor Woods ES HVAC Replacement	-	5,000	5,000	-	-	-	10,000
Forest Ridge ES Boiler Replacement	-	-	600	-	-	-	600
Ilchester ES HVAC Replacement	-	-	5,000	5,000	-	-	10,000
Atholton ES Boiler Replacement	-	-	-	600	-	-	600
St Johns Lane ES HVAC Replacement	-	-	-	5,000	5,000	-	10,000
Mayfield Woods MS Boiler Replacement	-	-	-	-	-	600	600
Lime Kiln MS HVAC Replacement	-	-	-	-	-	6,700	6,700
Administration Office	4,000	5,000	3,000	-	-	-	12,000
Kitchen Modernizations	600	300	300	300	300	300	2,100
Special Education/Regional Program Needs	300	300	300	300	300	300	1,800
Indoor Environmental Quality Repairs	2,600	2,000	2,000	2,000	1,400	1,400	11,400
School Security Measures	1,000	1,000	1,000	1,000	2,000	2,000	8,000
Local Match for State Initiatives	1,000	1,000	1,000	1,000	1,000	1,000	6,000
Emergency Reserve	5,000	5,000	5,000	9,000	12,000	12,000	48,000
<b>TOTALS</b>	<b>\$ 19,565</b>	<b>\$ 30,051</b>	<b>\$ 31,326</b>	<b>\$ 26,092</b>	<b>\$ 23,908</b>	<b>\$ 26,226</b>	<b>\$ 157,168</b>

# FY 2022-2031 Long-Range Master Plan

Superintendent Proposed

September 10, 2020

(In Thousands)

Capacity	Project	County Project	Occupancy	Approved Appropriations	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Total Approp. plus FY22-FY31 Request
540	Talbott Springs ES Replacement	E1043	Sept 2022	\$ 38,377	\$ 5,090	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 43,467
1,658	New HS #13	E1035	Sept 2023	54,986	42,699	25,357	6,955	-	-	-	-	-	-	-	129,997
200	Hammond HS Renovation/Addition	E1024	Sept 2023	38,006	29,058	28,490	11,000	-	-	-	-	-	-	-	106,554
195	Dunloggin MS Renovation/Addition	E1049	Sept 2027	-	-	-	3,557	9,555	14,077	14,418	5,884	-	-	-	47,491
788	New ES #43	E1039	Sept 2028	-	-	-	-	7,065	17,500	17,000	17,258	6,030	-	-	64,853
292	Oakland Mills MS Renovation/Addition	E1036	Sept 2030	-	-	-	-	-	-	5,479	12,323	14,621	14,919	5,228	52,570
340	Centennial HS Renovation/Addition	E1025	Sept 2031	-	-	-	-	-	-	-	13,487	34,191	36,258	33,490	117,426
	Systemic Renovations/Modernizations	E1044		58,134	19,565	30,051	31,326	26,092	23,908	26,226	28,000	22,000	22,000	22,000	309,302
	Roofing Projects	E1046		17,997	5,000	1,000	1,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	59,997
	Playground Equipment	E0990		3,180	250	250	250	500	500	500	500	500	500	500	7,430
	Relocatable Classrooms	E1045		6,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	21,500
	Site Acquisition & Construction Reserve	E1047		-	-	-	-	-	-	2,000	2,000	2,000	2,000	2,000	10,000
	Technology	E1048		7,500	3,750	5,500	5,500	7,500	7,500	5,500	5,500	5,500	5,500	5,500	64,750
	School Parking Lot Expansions	E1012		4,200	600	600	600	600	600	600	600	600	600	600	10,200
	Planning and Design	E1038		1,100	300	300	300	300	300	300	300	300	300	300	4,100
	Barrier Free	E0989		5,953	200	200	200	200	200	200	200	200	200	200	7,953
	<b>TOTALS</b>			<b>\$ 235,933</b>	<b>\$ 108,012</b>	<b>\$ 93,248</b>	<b>\$ 62,188</b>	<b>\$ 58,312</b>	<b>\$ 71,085</b>	<b>\$ 78,723</b>	<b>\$ 92,552</b>	<b>\$ 92,442</b>	<b>\$ 88,777</b>	<b>\$ 76,318</b>	<b>\$ 1,057,590</b>

Ten-Year Long-Range Master Plan = \$821,657

## Capital Planning



Capital planning is an ongoing process where the annual Capital Improvement Program (CIP) and Long-Range Master Plan are updated to reflect changes in enrollments, building capacities, and other conditions. The HCPSS provides other relevant publications, which should be taken as a whole with the capital budget. These include the Feasibility Study, Educational Facilities Master Plan, and the Comprehensive Maintenance Plan.

The formulation of the FY 2022 Capital Budget, FY 2023–2027 Capital Improvement Plan, and the FY 2022–2031 Long-Range Master Plan begins with the annual completion of enrollment projections first presented in the 2020 Feasibility Study. The results of this projection are also included in this document in pre- and post-measures charts. Capacities of schools dictate the calculation of capacity utilization percentage, a measure which allows the effect of school projections to be illustrated in a meaningful way. A school with capacity utilization over 110 percent is deemed to be over-utilized, while a school below 90 percent capacity utilization is deemed to be under-utilized. This range is set by Board of Education policy.



### Boundary Review

School attendance area adjustments are an integral part of the CIP. The HCPSS is responsible for ensuring that school buildings in the county are run efficiently and effectively. This means keeping schools at or near capacity and ensuring that most available seats are used before new schools would be built. Boundary adjustments are used to ensure that existing capacity and the scheduled capital projects efficiently accommodate projected student enrollments.



While boundary plans are implied for new facilities proposed in this plan, formal approval of those plans will not occur until the year before they take effect. Changing circumstances may require different plans.



## Capital Planning and Growth Management

### General Plan

The CIP must conform with an important County planning document, the Howard County General Plan. Known as *PlanHoward 2030*, it includes annual residential development targets through 2030. The HCPSS works closely with the Howard County Government to identify future funding sources so that our capital plan best supports the growth management goals of the Howard County General Plan. The capital budget is presented to the Howard County Planning Board so they may make a finding of conformance with the General Plan to the County Council.

The General Plan policy most relevant to this capital budget is Policy 6.1h -- Schools, which directs HCPSS to make efficient use of existing school capacity avoiding unnecessary capital outlays. Including the most recent Board approval on November 21, 2019, HCPSS has conducted five years of boundary adjustments since the adoption of *PlanHoward 2030* to open new schools and make more efficient use of existing schools. Approximately 11,100 students were reassigned. Nearly 90 percent of these students were relocated to existing schools.

The General Plan also guides land development in accordance with relevant state growth management laws like the 1997 Priority Funding Areas Act and Smart Green and Growing Act which direct state spending to existing communities and places where local governments want state investment to support future growth, rather than farmland or undeveloped land. The HCPSS has invested heavily in priority funding areas with the construction of Ducketts Lane Elementary School, Thomas Viaduct Middle School and Hanover Hills Elementary School. Projects proposed outside of the priority funding area are systemic renovations necessary to maintain systems in existing schools, like boiler or HVAC upgrades.



### Adequate Public Facilities Ordinance

The Adequate Public Facilities Ordinance (APFO) ties future residential construction in Howard County to projected school enrollments and school capacities. An update to the APFO was adopted by the County Council on February 5, 2018. Attendance areas that show a projected capacity utilization over 105 percent of an elementary school or region, 110 percent of a middle school or 115 percent of a high school program capacity are closed to future residential development until an attendance area adjustment or a capital improvement can be completed. The APFO test for opening or closing a school attendance area to new residential building looks at the projected population of a school three years out from the current year.





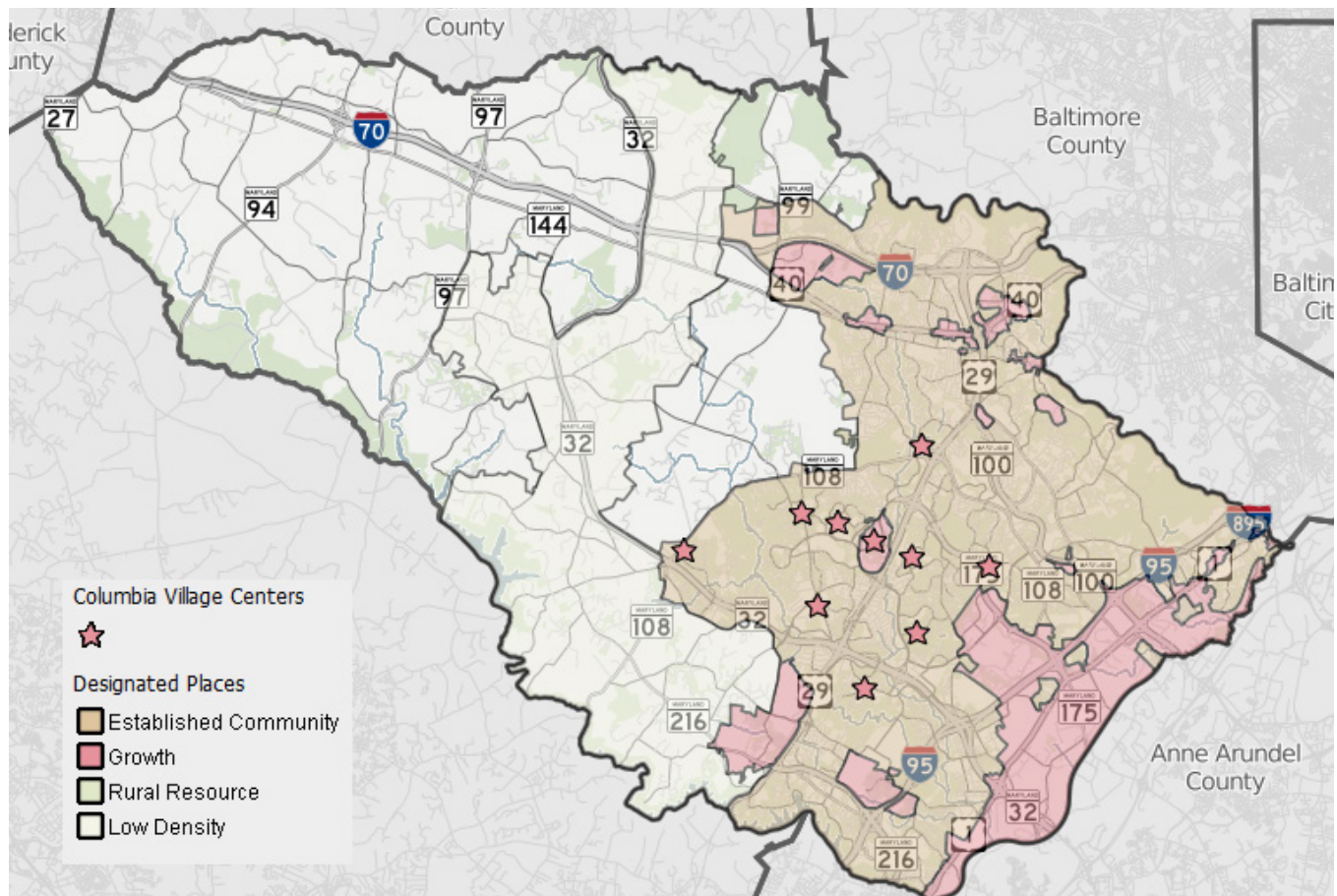
## Capital Planning and Growth Management

The School Capacity charts that appear in the Supporting Data section are the charts that were approved for submission to the Howard County Council by the Board of Education on May 14, 2020, and subsequently approved by the County Council on July 27, 2020, and begin with the year 2023. The School Capacity charts do not include new schools or projects when their sites have not yet been acquired. As the school system secures deeds for the sites to these planned schools or projects, they will be reflected in that year's School Capacity chart. Capacities used in the School Capacity Charts include planned early childhood program placement for several schools in SY 2020-21. Some program placements were ultimately revised based on reductions in operating budget allocations.

Along with the elementary, middle and high school tests, a regional test within planning regions at the

elementary level is also included in the ordinance. Using the School Capacity charts as indicators at the elementary level, three regions are "closed" in 2023 and twenty (plus seven additional attendance areas based on the region test) schools are "closed" in 2023. At the middle school level, five schools are "closed" in 2023. At the high school level, five schools are "closed" in 2023.

With the pre-/post-measures approach, the APFO formatted charts found in the Supporting Data section are in the pre-measures format. These charts represent the FY 2021 Capital Budget projects and the new projections. The post-measures charts represent the recommended capital projects for the FY 2022 Capital Budget and no proposed boundary adjustments and are for demonstrative purposes only.



The General Plan process was followed by adoption of the growth tiers map. Future development and school needs are planned in growth areas or village centers.

## Enrollment Projections and School Capacities

### Projection Methods

The formulation of the capital budget begins with the annual completion of enrollment projections, which were first published in the 2020 Feasibility Study. The enrollment projections included in this document are the result of a collaborative effort between the HCPSS, Howard County Department of Planning and Zoning, Maryland Department of Health and Mental Hygiene, and other county and state agencies.

The calculation of the future enrollment projection is based upon a "cohort survival ratio" method of projecting student enrollments. This methodology looks at past population patterns within the county to construct "survival ratios" in predicting a particular grade's migration through the school system. For example, cohort-survival ratios predict how many second graders will result from last year's first graders, how many third graders will result from last year's second graders, and continues until the number of twelfth graders from last year's eleventh graders is predicted. A geographical cohort survival ratio is used rather than a school-based cohort survival ratio to maintain comparability regardless of any boundary adjustments. Finally, the effects of new housing, the net effect of resale of existing housing, and programs housed at the school that impact enrollment are added to the cohort.

### Capacities



Equitable evaluation of the impact of projected enrollment growth requires calculation of the capacities of schools. Capacities are not necessarily fixed to the capacity designed when a building first opened. Changes in use, programs, and standards can effectively change capacity.

High school capacities were evaluated and updated by the Board of Education in March 2009. High school program capacities are a product of either 80 or 85 percent of the total number of teaching stations multiplied by 25 students, exclusive of special education classrooms, and factored with consideration that not all teaching stations can be scheduled for use every period of the school day. Further, special-use teaching stations may not be adaptable for academic programs even if the space is available for a period of the school day.

Middle school capacities were evaluated and approved by the Board on September 26, 2013, after a full study and report by Gilbert Architects Inc. Middle school program capacities are a product of 95 percent of the total number of teaching stations multiplied by 20.5 students, exclusive of special education classrooms. Like high schools, not all teaching stations can be scheduled for use every period of the school day.

Elementary school capacities were evaluated and approved by the Board on October 23, 2014, after a full study and report by Gilbert Architects Inc. Elementary school program capacities are based on 22 students for each Kindergarten classroom, 19 students for each classroom in Grades 1 and 2, and 25 students for each classroom in Grades 3–5. Not included in the capacities for elementary schools are resource/instructional spaces that are utilized on a schoolwide basis where no one group of students is assigned exclusively. Some examples of spaces not included in the capacity are gymnasiums or multipurpose rooms, cafeteriums, art rooms, music rooms, media centers, gifted and talented rooms, or rooms dedicated to regional programs such as prekindergarten.



## Types of Capital Projects



The CIP provides for all facilities needs for the school system. Projects are identified by their purpose as described below.

### Capacity Projects

New facilities or additions are proposed when projected enrollments cannot be accommodated reasonably within available capacity. The decision to construct a new facility or build an addition on an existing school involves consideration of fiscal implications as well as consideration of the following:

- Growth and location of the population to be served.
- Available capacity in surrounding schools.
- Accommodating needs of current and desired educational programs.

Each capacity project in the CIP has first been evaluated in the annual Feasibility Study, which balances school boundary adjustments with capital investments. If the attendance areas for existing schools can be adjusted, capital expenditures can be avoided or at least delayed. The Board of Education will review the CIP and set direction as appropriate during capital budget presentations each year. The opening of new schools requires changes in boundaries. Attendance area adjustments are not annual but potential options are evaluated annually in the Feasibility Study.

From the receipt of planning funds until completion of a project, it typically requires a maximum of three years to plan and construct an elementary or middle school and five years for a high school. Some parts of the construction process can be expedited at cost.

### Non-Capacity Projects

Capital projects, which don't produce capacity are "systemic" and serve the long-term plans of HCPSS and the state of Maryland by keeping and maintaining the systems that support 30–40 year infrastructure investments. Most maintenance investments are covered by the operating budget and documented in the annual Comprehensive Maintenance Plan published as a requirement of the Maryland State Department of Education (MSDE). Each year staff evaluates the comprehensive maintenance plan to identify projects that exceed regular maintenance and add these projects to the capital improvement program as appropriate.

Renovations of existing schools are proposed when repairs of the structure's internal systems are no longer economically feasible. As the Comprehensive Facility Master Plan is updated using the results of ongoing facility assessments, specific projects are identified in the long-range master plan.

## Types of Capital Projects

The decision to renovate an existing school involves the following considerations:

- Prioritization of needs based upon the current facility assessment.
- Optimal sequencing to ensure eligibility for state funding.
- Existing electrical, HVAC, roofing, and/or other major mechanical systems needs.
- Educational space needs.
- Health and safety needs.
- Americans with Disability Act (ADA) needs.
- Need to provide improved spaces for general teaching areas and/or supporting areas.

When renovating an older school, there are multiple considerations of how to best balance the existing footprint of the building against requirements defined in newer versions of the educational specifications. Renovation guidelines have been developed to provide a set of standards, guidelines, and procedures for use by HCPSS administrative staff and architectural/engineering firms engaged in the planning and design of renovation work for the school system.

### Roofing Projects

A well-planned roofing program is critical to all other systems in a capital facility. When roofing systems wear, the damage from a failure can impact other systems and multiply costs. HCPSS regularly inspects roofing systems and provides reports to the state of Maryland. Planning and project execution must balance system warranties, state funding eligibility, and the risk of maintenance deferral.

### Playground Equipment

Elementary school students are stimulated by interesting and engaging playground installations. The playground planning process considers the needs of a wide-range of ages and skills to develop strength, social skills, coordination, balance, and motor planning. Each year various playgrounds are replaced, repaired, or upgraded based upon need.





## Types of Capital Projects

### Relocatable Classrooms

Relocatable classrooms are pre-fabricated, stand-alone buildings which provide temporary capacity to a school to relieve overcapacity, provide temporary swing space during renovations/additions, or provide space for a school's program needs. Currently there are 234 modular/relocatable classrooms for Grades K–12 being used by the HCPSS, including several larger modular units of at least five classrooms.

In some cases modular units are integrated into a building's core facility, such as at St. John's Lane Elementary School and Clarksville Middle School. These units are included in building capacity as they are considered permanent additions.

In recent renovations, integrated modular units have been replaced, like Bollman Bridge Elementary School, Deep Run Elementary School, Waverly Elementary School and Patuxent Valley Middle School. The school system conducts reviews of the physical condition and usage of all relocatable/modular units. When units are inspected, the cost of repairs is weighed against the option of retiring

the units.

### Site Acquisition and Construction Reserve

The selection and acquisition of appropriate school sites figures prominently in the development of a capital program. Each proposed school site is carefully evaluated prior to acquisition according to Board-approved selection criteria identified in Policy 6000 Site Selection and Acquisition. Delays in acquisition of suitable school sites may affect the timing of construction of needed schools, resulting in overcrowding situations.

The HCPSS continues to maintain a "land bank" to purchase potential sites or portions of land to augment sites. Larger sites identified in the subdivision review process may be reserved to be budgeted as line items in future capital budgets. This fund is also used as a reserve for unanticipated construction costs.



## Land Bank as of July 1, 2020

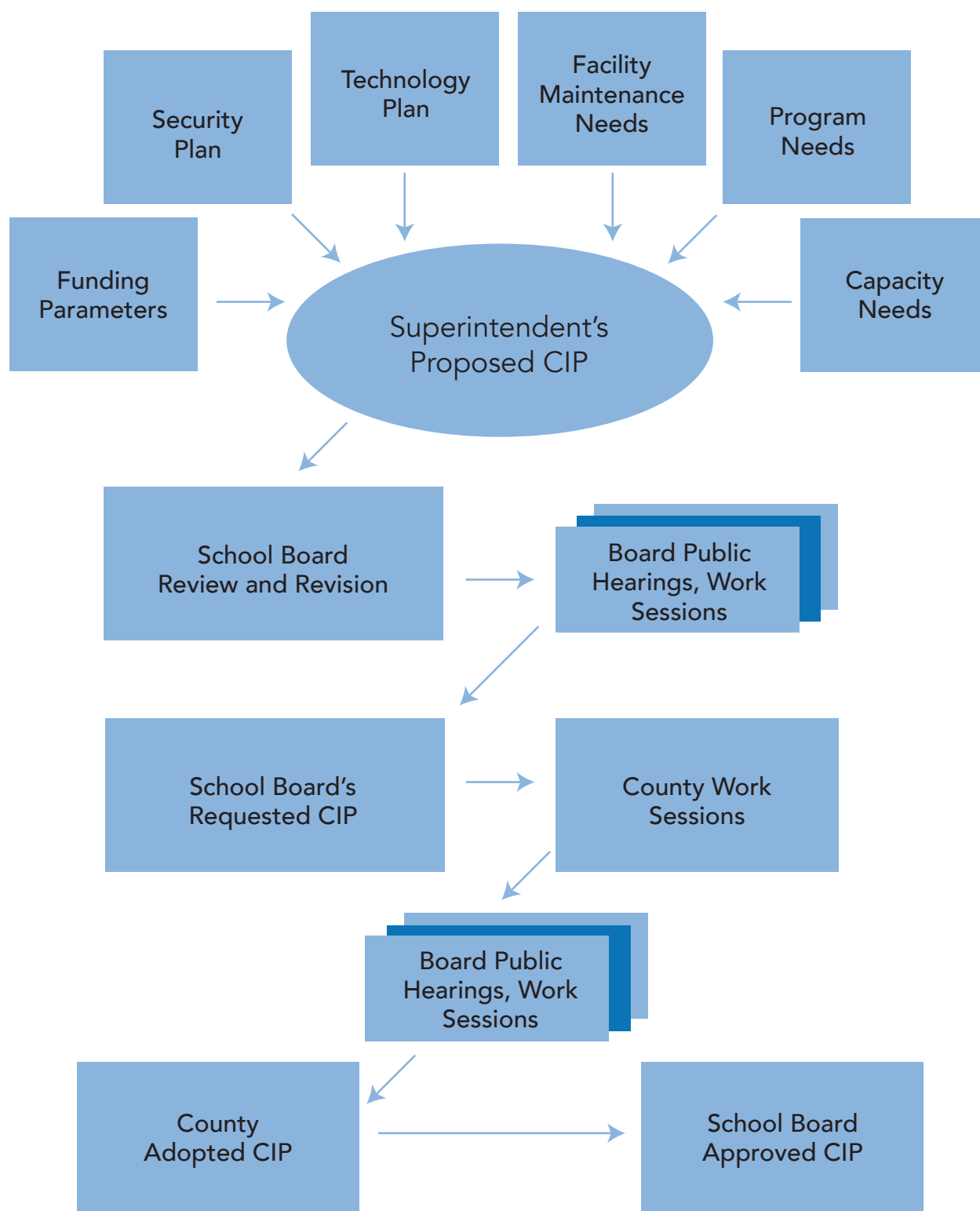
The Board maintains ownership and/or the rights to purchase parcels of land for future school sites, commonly known as the "Land Bank." The following schedules detail the current land in the Land Bank.

Owned Sites	Acreage	Location	Date Acquired	Cost
Sunny Spring Drive (aka Hawthorne Park)	10	Sunny Spring Drive, between Cricket Pass and Golden Hook	1974	\$ 1
Future Middle School Site	41	2865 Marriottsville Road	2007	\$ 1,700,000
Faulkner Ridge Center	9.01	10598 Marble Faun Lane	1968	\$ 1
Clary's Forest	10	Little Patuxent Parkway, at its intersection with Bright Passage	2018	\$ 0
Dickinson Park	11	Eden Brook Drive, between Sweet Hours Way and Weather Worn Way	2019	\$ 0
Huntington Park	11	Vollmerhausen Road, between Murray Hill Road and Polished Stone	2019	\$ 0
Mission Road	79	Mission Road across from Concord Drive	2019	Purchased by County





## Capital Improvement Program (CIP) Development Process



## Calendar for Development and Review/Approval

# Superintendent's Proposed FY 2022 Capital Budget

## Capital Improvement Program FY 2023–2027

## Long-Range Master Plan FY 2022–2031

Thursday, June 11, 2020 7:30pm - Board Room	Staff presentation of Feasibility Study Report including 2020 enrollment projections.
Tuesday, August 18, 2020 7:00pm - Board Room	Board of Education Public Hearing and Pre-Development Work Session.
Thursday, September 10, 2020 7:00pm - Board Room	Staff presentation of the Superintendent's Proposed Capital Budget.
Thursday, September 24, 2020 7:00pm - Board Room	Board of Education Public Hearing on Superintendent's Proposed Capital Budget. Work Session and Approval of Superintendent's Proposed Capital Budget following the Public Hearing.
Thursday, October 1, 2020 7:00pm	Planning Board Public Hearing on Board of Education's Proposed Capital Budget.
Wednesday, October 7, 2020	Board of Education submission of Proposed Capital Budget to Maryland Interagency Commission on School Construction.
Monday, November 2, 2020 7:00pm	County Council approval of Board of Education's Proposed Capital Budget for letter of support to the Interagency Committee on School Construction.
Thursday, February 11, 2021 3:00pm - Board Room	Board of Education Adoption of the Requested Capital Budget.
Mid-March	Board of Education submission of the Requested Capital Budget to the County Executive and Budget Administrator.
TBD	County Executive Public Hearing on Capital Budget.
TBD	County Executive presentation of the Capital Budget.
Thursday, April 29, 2021 7:00pm - Board Room	Board of Education Work Session.
TBD	County Council Public Hearing on the Education portion of the County Executive's Capital Budget.
Thursday, May 6, 2021 7:00pm - Board Room	Board of Education Public Hearing.
TBD	Staff pre-file of the Adequate Public Facilities Ordinance Open/Closed Chart to County Council.
TBD	County Council Adoption of the Capital Budget.
Thursday, May 27, 2021 3:00pm - Board Room	Board of Education Adoption of the Capital Budget
TBD	County Council Adoption of Adequate Public Facilities Ordinance Open/Closed Chart.

TBD (To Be Determined) - Please check Howard County's website for the full schedule: <https://www.howardcountymd.gov/>  
Schedule is subject to change. Verify the schedule at [www.hcps.org](http://www.hcps.org) and <https://www.howardcountymd.gov/>

Superintendent's Proposed FY 2022 Capital Budget  
Capital Improvement Program FY 2023–2027  
Long-Range Master Plan FY 2022–2031

Section 2

# System Information

September 2020







## HCPSS Facilities at a Glance

The HCPSS maintains well over seven million square feet of school facilities and other buildings in service of delivering the educational program and for use by the community. The school system owns or controls approximately 1,820 acres of land. Approximately seven percent of HCPSS staff are devoted in some way to the maintenance of facilities.



### HCPSS Facilities

#### 77 Schools

42 Elementary Schools

20 Middle Schools

12 High Schools

3 Special Schools

#### Ancillary Facilities

Ascend One

Berger Road Building (Shared Space)

Central Office

Faulkner Ridge (Vacant)

Gerwig Road Building (Warehouse)

Mendenhall Court (Leased Offices and Shops)

Ridge Road Center (Shops)

Old Bushy Park (Storage)

Old Cedar Lane (Offices)

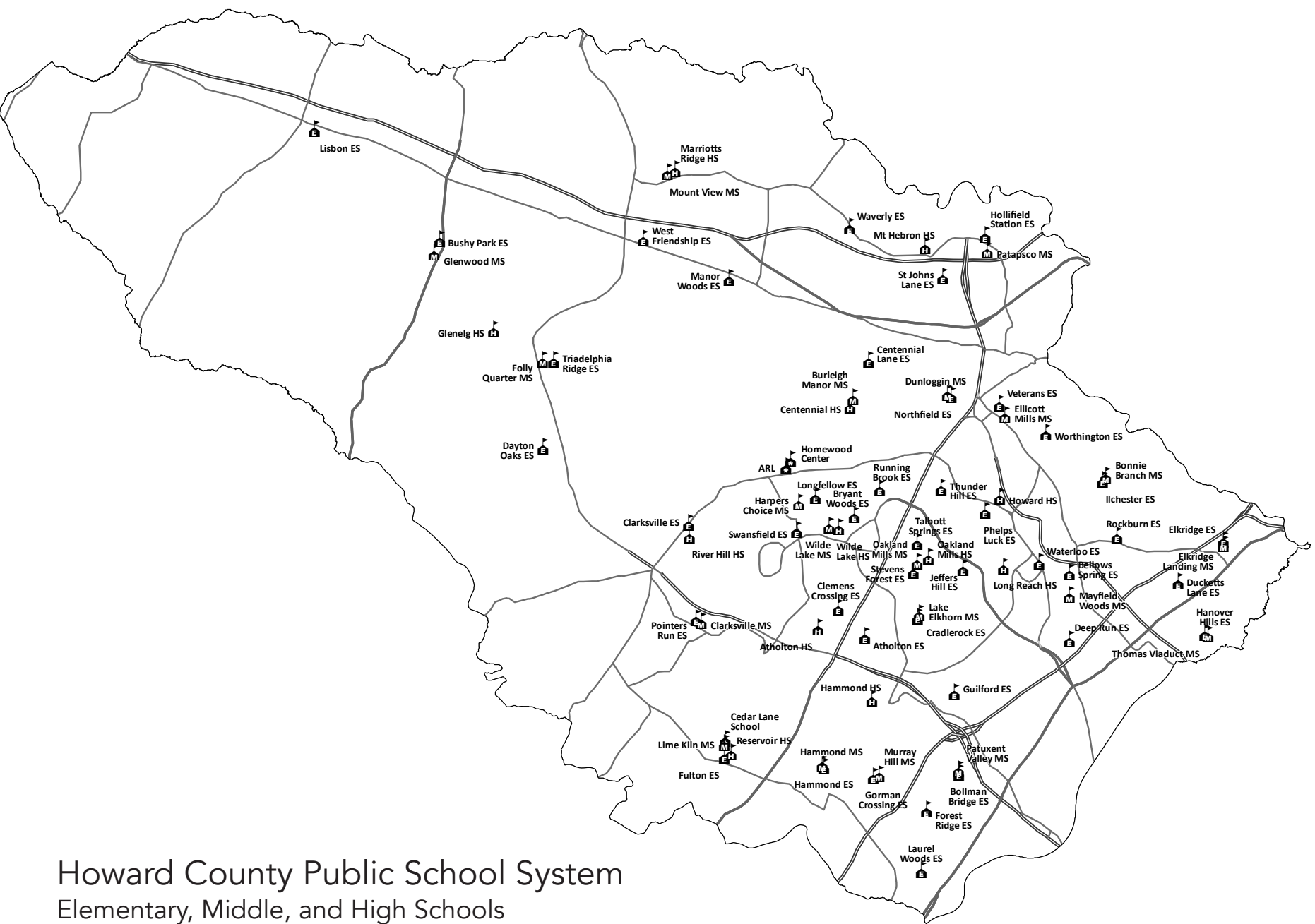
### Average Age of Facilities

Elementary	Middle	High
38 years	32 years	40 years

### Enrollment\*

<b>Total Enrollment (Pre-K–12)</b>	<b>58,878</b>
Elementary (Pre-K–5)	26,814
Middle (6–8)	13,815
High (9–12)	18,132
Special Schools	117

\* Official September 30, 2019 Enrollment Report.



Howard County Public School System  
Elementary, Middle, and High Schools  
2020-2021



Superintendent's Proposed FY 2022 Capital Budget  
Capital Improvement Program FY 2023–2027  
Long-Range Master Plan FY 2022–2031

Section 3

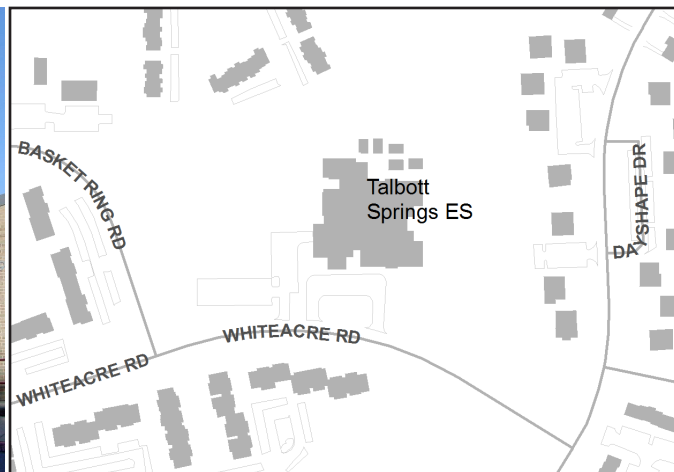
# Project Detail

September 2020

## Talbott Springs Elementary School Replacement: Project 1043

9550 Basket Ring Road, Columbia, MD 21045  
<http://tses.hcpss.org/>

Nancy Thompson, Principal  
 410.313.6915



### Project Description

The Talbott Springs Elementary School project will replace an aging elementary school with a modern facility. The planned scope of work includes a replacement facility to provide students with a new modern energy efficient building with programmatic and physical upgrades as well as new mechanical, electrical and technology systems in compliance with the HCPSS General Educational Specifications for New Elementary Schools. This project calls for an expansion of the educational program spaces, including additional programmatic space needed for Title I services. Talbott Springs Elementary School is expected to achieve USGBC LEED Silver Certification. The complete scope of this project is defined by the Board of Education approved construction documents (CD) brochure (see Policy 6020 in the Supporting Data Section for a complete description of the process) and any change orders approved subsequent to submittal of the CD brochure.

### Project Justification

Talbott Springs Elementary School opened in 1973 and was renovated in 2000. The art room and gymnasium were expanded in 2000 and all day kindergarten was added in 2008. In April 2009, HCPSS engaged Gilbert Architects Inc. to conduct a facility assessment of elementary schools. The report concluded that Talbott Springs Elementary School had an 18.7 percent deficiency of educational program space.

### Project Timeline

Feasibility Study (6 months): June - December 2018  
 Planning and Design (16 months): January 2019 - March 2020  
 Contract Bidding and Award (6 months): April - September 2020  
 Construction (24 months): October 2020 - August 2022  
 Close Out (3 months): September - November 2022  
 \* Parking lot and fields to be completed December 2022

#### Building Data

Year Built	1973
Age	47
Site Area (acres)	10
Last Renovation/Addition	2008
Current Relocatables	10
Current Capacity	377
9/2019 Enrollment	472

#### Projections/Capacity Utilization

2020 Projection	466
Projected Utilization	124%
2022 Projection	453
Projected Utilization	120%
Post-Project Cap.	540
Projected Utilization	84%

## New HS #13: Project 1035

Mission Road, Jessup MD



Architect rendering of Marriotts Ridge High School courtesy of TCA Architects.

### Project Purpose

New HS #13 will be a new facility. This new school is planned to have 1,658 seats. The FY 2022 Capital Budget recommends completion of New HS #13 in 2023. Planning was initiated in FY 2019. The complete scope of this project is defined by the Board of Education approved construction documents (CD) brochure (see Policy 6020 in the Supporting Data Section for a complete description of the process) and any change orders approved subsequent to submittal of the CD brochure.

### Project Justification

Based upon enrollment projections, at least one additional high school is needed to accommodate growth. Balanced capacity utilization in the Route 1 Corridor alone would require 1,580 additional seats by 2023.

### Project Timeline

Feasibility Study (6 months): October 2017 - March 2018  
Planning and Design (18 months): April 2018 - September 2019  
Contract Bidding and Award (6 months): October 2019 - March 2020  
Construction (42 months): April 2020- August 2023  
Close Out (3 months): September - November 2023

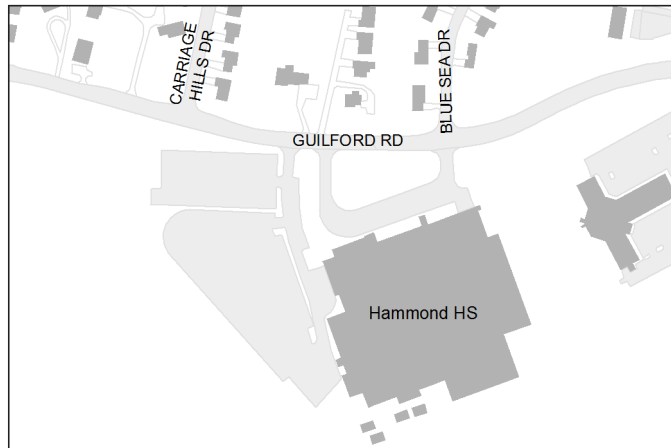




## Hammond High School Renovation/Addition: Project 1024

8800 Guilford Road, Columbia, MD 21046  
<http://hahs.hcpss.org/>

John DiPaula, Principal  
 410.313.7615



### Project Purpose

The Hammond High School project will renovate and expand the existing school. The project will consist of a complete systemic renovation and addition to the school that will replace the aging heating and cooling systems, upgrade the plumbing and electrical systems, supply new data technology and security systems, provide new interior finishes throughout the building, create ADA accessibility compliance throughout, repartition select areas of the school, and construct building additions as necessary to fulfill program deficiencies. It is also the intent to concentrate on energy efficient systems. An addition of 200 seats of new capacity is planned for this project. The complete scope of this project is defined by the Board of Education approved construction documents (CD) brochure (see Policy 6020 in the Supporting Data Section for a complete description of the process) and any change orders approved subsequent to submittal of the CD brochure.

### Project Justification

Hammond High School is a one-story building that first opened in 1976 and underwent some renovation and addition work in 1996, followed by a dance studio addition in 2011. The present need is a complete renovation of the school with systemic upgrades to bring it into compliance with the Howard County Public School Systems Guidelines Manual for Renovations and Modernizations of Existing Schools.

### Project Timeline

Feasibility Study (3 months): October - December 2018  
 Planning and Design (14 months): January 2019 - February 2020  
 Contract Bidding and Award (6 months): March - May 2020  
 Construction (36 months): June 2020 - December 2023  
 Close Out (3 months): December 2023 - February 2024

#### Building Data

Year Built	1976
Age	44
Site Area (acres)	33.14
Last Renovation/Addition	2011
Current Relocatables	4
Current Capacity	1,220
9/2019 Enrollment	1,408

#### Projections/Capacity Utilization

2020 Projection	1,329
Projected Utilization	109%
2023 Projection	1,411
Projected Utilization	116%
Post-Project Cap.	1,440
Projected Utilization	98%



## Dunloggin Middle School Renovation/Addition: Project 1049

9129 Northfield Road Ellicott City, MD 21042  
<http://dms.hcpss.org/>

Antionette Roberson, Principal  
 410.313.2839



### Project Purpose

The Dunloggin Middle School project will expand educational program spaces with 195 seats of new capacity and renovate the existing facility. This project calls for an expansion of the educational program spaces and renovation of the existing facility. The renovation will include a complete systemic renovation of the existing building including new electrical, mechanical, plumbing, technology, roofing and life safety systems. The project will provide additional classroom space and core infrastructure space necessary to operate effectively at the larger capacity. Interior spaces will be reconfigured, new finishes provided, accessibility improve, and new spaces added as required bringing the facility into compliance with renovation specifications. USGBC LEED Certification will be considered in the planning of this project. The complete scope of this project will be defined by the Board of Education approved construction documents (CD) brochure (see Policy 6020 in the Supporting Data Section for a complete description of the process) and any change orders approved subsequent to submittal of the CD brochure.

### Project Details

Dunloggin Middle School opened in 1973 and was renovated in 1999. In August 2008, HCPSS engaged Gilbert Architects, Inc. to conduct a facility assessment of middle schools. The report concluded that Dunloggin Middle School has a 13.8 percent deficiency of educational program spaces.

### Project Timeline

Feasibility Study (3 months): July - September 2023  
 Planning and Design (13 months): October 2023 - October 2024  
 Contract Bidding and Award (6 months): November 2024 - May 2025  
 Construction (24 months): June 2025 - August 2027  
 Close Out (2 months): September - October 2027

#### Building Data

Year Built	1973
Age	47
Site Area (acres)	20
Last Renovation/Addition	1999
Current Relocatables	5
Current Capacity	565
9/2019 Enrollment	628

#### Projections/Capacity Utilization

2020 Projection	621
Projected Utilization	110%
2027 Projection	623
Projected Utilization	110%
Post-Project Cap.	760
Projected Utilization	82%

## New Elementary School #43: Project 1039

Location to be determined.



### Project Purpose

New ES #43 will be a new facility. This new school is planned to have 788 seats. The FY 2022 Capital Budget recommends completion of New ES #43 in 2028. Planning is scheduled to begin in FY 2025. The complete scope of this project will be defined by the Board of Education approved construction documents (CD) brochure (see Policy 6020 in the Supporting Data Section for a complete description of the process) and any change orders approved subsequent to submittal of the CD brochure.

### Project Justification

Based upon enrollment projections, an additional elementary school is needed to accommodate growth in southeastern Howard County. The projected growth in schools such as Hammond Elementary School, Gorman Crossing Elementary School, Forest Ridge Elementary School and Fulton Elementary School continues to support the additional seat need.

### Project Timeline

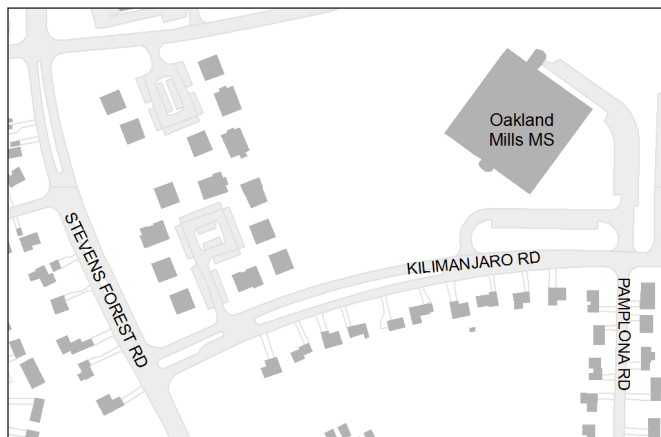
Feasibility Study (6 months): June - December 2024  
Planning and Design (16 months): January 2025 - March 2026  
Contract Bidding and Award (6 months): April - September 2026  
Construction (24 months): October 2027 - August 2028  
Close Out (3 months): September - November 2028



## Oakland Mills Middle School Renovation/Addition: Project 1036

9540 Kilimanjaro Road, Columbia, MD 21045  
<http://omms.hcpss.org/>

Allen Cosentino, Principal  
 410.313.6937



### Project Purpose

The Oakland Mills Middle School project will renovate and add seats to the existing facility. The project calls for a renovation of the existing building in accordance with recommendations from the Feasibility Study as well as the addition of 292 seats. Renovation will include new electrical, mechanical, plumbing, technology, roofing, and life safety systems as applicable per the scope of work. Some Interior spaces will be reconfigured, new finishes provided, accessibility improved, and new spaces added as required, bringing the facility into compliance with the HCPSS Guidance Manual for Renovations and Modernizations of Existing Schools. The complete scope of this project will be defined by the Board of Education approved construction documents (CD) brochure (see Policy 6020 in the Supporting Data Section for a complete description of the process) and any change orders approved subsequent to submittal of the CD brochure.

### Project Details

Oakland Mills Middle School opened in 1972 and was renovated in 1998. In August 2008, HCPSS engaged Gilbert Architects Inc. to conduct a facility assessment of middle schools. This project evaluated and scored each school according to the Council of Educational Facilities Planners, International (CEFPI) appraisal guidelines. The assessment included reviewing each school's plan layouts and measurements of spaces to compare to the educational specifications developed by HCPSS for middle schools. The report concluded that Oakland Mills Middle School had 8.8 percent deficiency of educational program space.

### Project Timeline

Feasibility Study (3 months): July - September 2026  
 Planning and Design (13 months): October 2026 - October 2027  
 Contract Bidding and Award (6 months): November 2027 - May 2028  
 Construction (24 months): June 2028 - August 2030  
 Close Out (2 months): September - October 2030

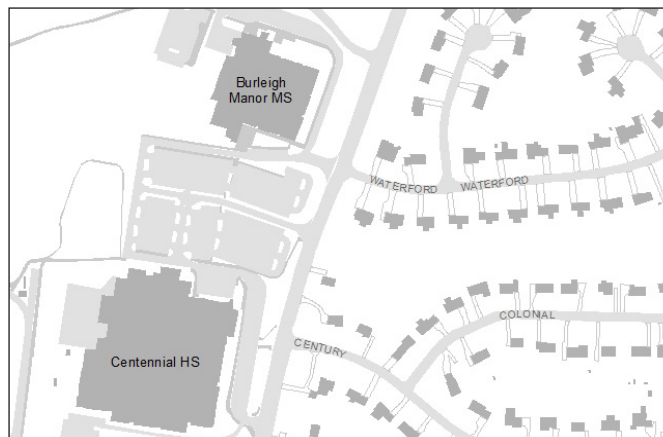
Building Data	
Year Built	1972
Age	48
Site Area (acres)	20
Last Renovation/Addition	1998
Current Relocatables	0
Current Capacity	506
9/2019 Enrollment	501
Projections/Capacity Utilization	
2020 Projection	509
Projected Utilization	101%
2030 Projection	491
Projected Utilization	97%
Post-Project Capacity	798
Projected Utilization	62%



## Centennial High School Renovation/Addition: Project 1025

4300 Centennial Lane Ellicott City, 21042  
<http://chs.hcpss.org/>

Cynthia Dillon, Principal  
 410.313. 2856



### Project Purpose

The Centennial High School project will renovate and add seats to the existing facility. The project calls for a renovation of the existing building in accordance with recommendations from the Feasibility Study as well as the addition of 340 seats. Renovation will be a full systemic of the existing systems, including electrical, mechanical, plumbing, technology, roofing, and life safety systems corresponding with the scope of work. Interior spaces will be reconfigured, new finishes provided, accessibility improved, and new spaces added as required, bringing the facility into compliance with the HCPSS Guidance Manual for Renovations and Modernizations of Existing Schools. The complete scope of this project will be defined by the Board of Education approved construction documents (CD) brochure (see Policy 6020 in the Supporting Data Section for a complete description of the process) and any change orders approved subsequent to submittal of the CD brochure.

### Project Details

Centennial High School is a one-story building that opened in 1977 and underwent some renovation/addition work in 1998 and 2002, followed by a dance studio addition in 2011. The present need is a complete renovation of the school with systemic upgrades to bring it into compliance with the Howard County Public School Systems Guidelines Manual for Renovations and Modernizations of Existing Schools.

### Project Timeline

Feasibility Study (3 months): October - December 2026  
 Planning and Design (14 months): January 2027 - February 2028  
 Contract Bidding and Award (6 months): March - May 2028  
 Construction (36 months): June 2028 - December 2031  
 Close Out (3 months): December 2031 - February 2032

#### Building Data

Year Built	1977
Age	43
Site Area (acres)	43
Last Renovation/Addition	2011
Current Relocatables	9
Current Capacity	1360
9/2019 Enrollment	1600

#### Projections/Capacity Utilization

2020 Projection	1489
Projected Utilization	110%
2031 Projection	1362
Projected Utilization	100%
Post-Project Capacity	1700
Projected Utilization	80%







## Systemic Renovations: Project 1044



### Systemic Renovations Actual Expenses

Fiscal Year	Actual Expense
FY 2016	\$ 10,920,834
FY 2017	\$ 7,872,598
FY 2018	\$ 5,543,132
FY 2019	\$ 11,777,007
FY 2020	\$ 22,694,655

School Facilities is charged with maintaining the facilities of the HCPSS in as near original condition and effectiveness as possible. Actual costs incurred in the Systemic Renovations Project over the past five years is above.

### Project Purpose

The Systemic Renovations project includes projects that are needed to bring older facilities up to current standards in lighting, electrical, HVAC systems, reconfiguring space, handicap accessible improvements, and provide for upgrades to other building systems. For larger systemic renovation projects (see project details section), the complete scope of projects are defined by the Board of Education approved construction documents (CD) brochure (see Policy 6020 in the Supporting Data Section for a complete description of the process) and any change orders approved subsequent to submittal of the CD brochure.

### FY 2021 Request Analysis

Project Funding (July 1, 2019 - June 30, 2021)	\$ 58,134,057
Project Cost-to-Date (through June 30, 2020)	(10,916,082)
FY 2021 Projected Costs/Encumbrances	(47,217,975)
Available Project Funding (July 1, 2021)	\$ -
Requested Budget FY 2022	\$ 19,565,000



## Project Details

Systemic renovation projects include improvements and installation of systems at various school sites, including projects of a critical nature such as sprinkler repair, HVAC repair, and window replacement. The Office of School Facilities publishes an annual Comprehensive Maintenance Plan which reflects the objectives and methods utilized to provide a safe and secure learning environment for Howard County's school community as required by the Public School Construction Program's Administrative Procedures Guide. This document has been consulted in the development of this budget for potential systemic projects. The FY 2022 Capital Budget request represents renovation work or planning for future construction at the following school system facilities:

**Applications Research Lab Maintenance**  
**West Friendship MBR**  
**Bonnie Branch MS Boiler Replacement**  
**Grounds/Fleet Infrastructure Capital Needs**  
**Administrative Office**

### HCPSS portion of Artificial Turf Replacement

The stadium synthetic turf field replacement program is planned on a ten year cycle. This program is a direct result from a Joint Use Agreement between HCPSS and Howard County Department of Recreation and Parks signed in 2012. It was recognized by both parties that a formal sharing of synthetic turf fields would be a great benefit to the HCPSS and the community at large. In addition, the installation of the synthetic turf dramatically increased playing time, playability, decreased the risk of injuries and lowered maintenance cost. The replacement cost for the synthetic turf for all fields will be shared by both agencies; (HCRP 75% and HCPSS 25%).

### Kitchen Modernizations

Kitchen modernization projects will be implemented in schools system-wide, as ongoing critical infrastructure assessments are conducted and needs are identified. Existing infrastructure in many kitchens is obsolete and unreliable. The cost to mitigate these risks exceeds the asset life cycle replacement cost of the infrastructure.

### Indoor Environmental Quality Project Repairs

Staff have implemented measures to reduce negative environmental impacts on schools over the last two years with this important funding source. Projects include maintenance of building envelopes, resolution of foundation issues, fixing settlement cracks, managing humidity related conditions and remediating flood damages.

Systemic Renovations



### Special Education/Regional Program Needs

The placement of new or the relocation of existing Special Education and regional programs is based on student needs and school capacity. Each program requires specific space configuration and education specifications.

### School Safety and Security Measures

School safety and security enhancement projects are currently ongoing to comply with the Maryland Safe to Learn Act. As additional critical infrastructure projects are identified during annual compliance assessments, they too will be scheduled and completed.

### Emergency Reserve

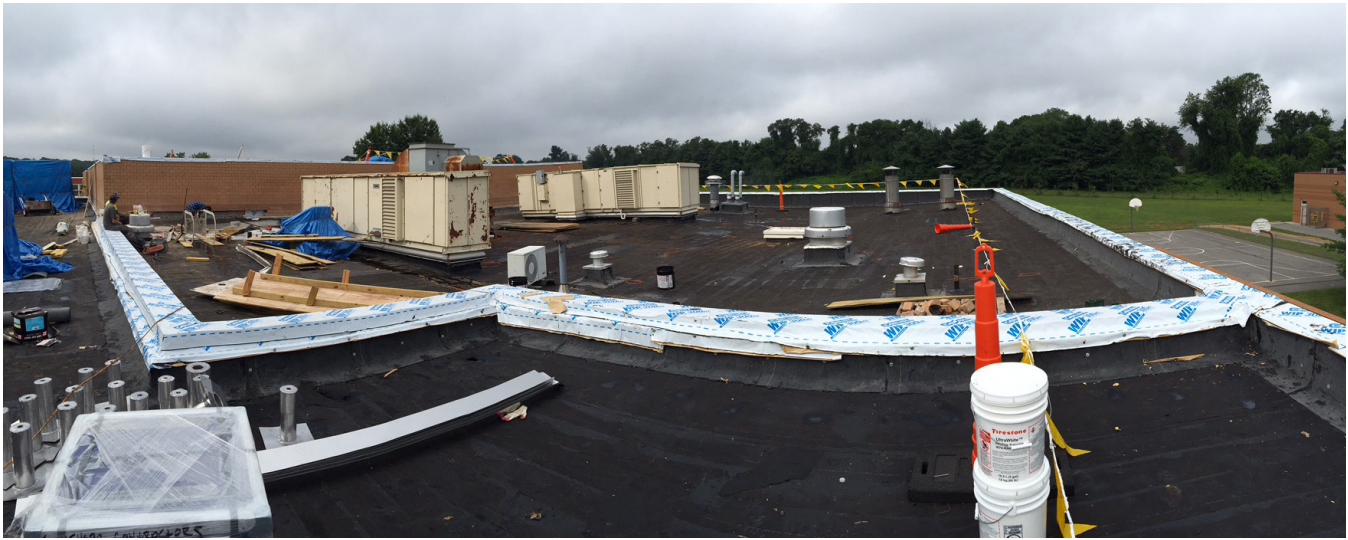
The emergency reserve funding assists with projects that are not eligible for capital project consideration, those that have exceeded their operational life, premature failures and unexpected weather related damages.

### Local Match for State Initiatives

In addition to County funding, State funding is critical to support the school system's capital funding needs. HCPSS is working to identify additional systemic projects that may be eligible for available State funding opportunities and/or initiatives. Since State funding is provided as reimbursement of eligible costs, it is essential for County funding to be in place prior to State application to ensure funding is available to plan and design projects as well as fund the County match, if required. Since State funding is never guaranteed, County funding levels should be in place to support completion of projects. This is an important step in striving to reduce deferred maintenance.



## Roofing Projects: Project 1046



### Project Purpose

Roofing Projects addresses aging roofs on various Howard County Public School System schools. A well-planned roofing program is critical to all other facility systems. When roofing systems wear, the damage can impact other building systems increasing repair costs exponentially. Roof planning is more than shingles and asphalt. Modern roofing systems are complex investments built to exact specifications and code requirements. The HCPSS inspects each facilities' roof twice a year and provides the reports to the State of Maryland. Planning and project execution must balance system warranties, state funding eligibility, and the risk of maintenance deferral.

### Roofing Projects Actual Expenses

Fiscal Year	Actual Expense
FY 2016	\$ 2,220,940
FY 2017	\$ 4,830,760
FY 2018	\$ 1,800,046
FY 2019	\$ 812,030
FY 2020	\$ 2,567,061

School Facilities oversees the Roofing Projects and provides maintenance and repairs for all HCPSS facilities. Actual costs incurred in Roofing Projects over the past five years is indicated in the chart above.

### FY 2022 Request Analysis

Project Funding (July 1, 2019 - June 30, 2021)	\$ 17,562,343
Project Cost-to-Date (through June 30, 2020)	(2,275,779)
FY 2021 Projected Costs/Encumbrances	(15,286,564)
Available Project Funding (July 1, 2021)	\$ -
Requested Budget FY 2022	\$ 5,000,000



## Project Details

The roof system is the largest area of the building that endures the most severe weather conditions. The roof protects the structural integrity of the building, equipment and its systems. Because of building age and environmental conditions, scheduled roof replacements must be completed to protect the investments that have been made in our facilities.

Roofing Projects include the design and construction of repairs to existing roof systems, the removal of old roof systems, and installation of a new roof system to include insulation membrane and flashings, sheet metal, drainage systems, and other associated components.

HCPSS is requesting funding for roof projects in FY 2022. In continued collaboration with the Office of School Construction, roofing Projects will be considered in conjunction with systemic renovations, when feasible.

The Office of School Facilities has and will continue to include the additional costs and impact related to the roof replacement projects, such as high ceiling cleaning of debris and fireproofing, budgeting for the 2018 IBC/IECC code for R-30 insulation, exterior sealants. Facilities will conservatively budget for these items but will have to revisit the schools to determine the final scope for budgeting purposes. These newer items will require additional thought regarding the roof budget and, more importantly, their impact on the project and schedule, which includes phasing.





## Playground Equipment: Project 0990



### Project Purpose

The Playground Equipment project will replace aging playgrounds at a variety of Howard County Public School System schools. This fund maintains a cycle of playground replacements. While playgrounds seem to be a standard installment at any elementary school, playgrounds can vary widely in design and are not specifically required by state or local codes or policies. Recess and unstructured play is a standard of Policy 9090 Health and Wellness. Research supports a link between learning and unstructured play. Elementary school students are stimulated by interesting and engaging playgrounds. The playground planning process considers the needs of a wide-range of ages and skills to develop strength, social skills, coordination, balance, and motor planning.

#### FY 2022 Request Analysis

Project Funding (July 1, 2019 - June 30, 2021)	\$	3,264,219
Project Cost-to-Date (through June 30, 2020)		(2,994,806)
FY 2021 Projected Costs/Encumbrances		(269,413)
Available Project Funding (July 1, 2021)	\$	-
Requested Budget FY 2022	\$	250,000

#### Playgrounds Actual Expenses

Fiscal Year	Actual Expense
FY 2016	\$ 85,058
FY 2017	\$ -
FY 2018	\$ 160,118
FY 2019	\$ 421,112
FY 2020	\$ 92,006

The Grounds Department oversees the Playground Equipment Project, managing safety requirements and a long-term replacement plan for all HCPSS playgrounds. Actual costs incurred in the Playground Equipment Project over the past five years is above. Without funding constraints, playground project expenses would be higher.

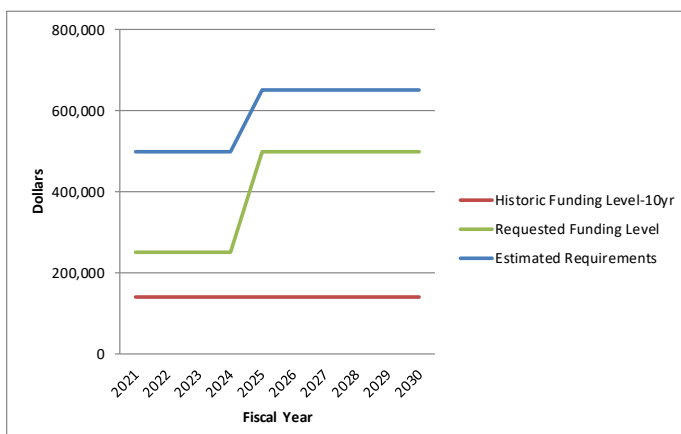




## Project Details

Playground replacement is planned every 15 years. In the interim, they are maintained and repaired using operating funds. This schedule delivers new designs and safety improvements in a reasonable period without requiring a much larger share of the capital budget. \$250,000 is adequate to replace both the kindergarten playground and grade 1-5 playground at an elementary school. In future years, more than two playground replacements are needed per year. Decisions about installing specific equipment are school based and require individual contracts. Better pricing may be possible through package bidding. Playground equipment at newly built schools is included in the funding request for the individual capital improvement project.

## Projected Playground Replacement Cost per FY



Long-Term Plan	
Playground Site	Fiscal Year
Bryant Woods Elementary School- (Age 5-12)	FY 2021
Guilford Elementary School- (K-Area)	FY 2021
Guilford Elementary School- (Age-5-12)	FY 2022
Clarksville Elementary School- (K-Area)	FY 2022
Waterloo Elementary School (Age 5-12)	FY 2023
Bollman Bridge Elementary School (K-Area)	FY 2023
Worthington Elementary School ( Age 5-12)	FY 2024
Pointers Run Elementary School (K-Area)	FY 2024
Gorman Crossing Elementary School ( Age 5-12)	FY 2025
Pointers Run Elementary School (Age 5-12)	FY 2025
Centennial Lane Elementary School (Age 5-12)	FY 2025
Clarksville Elementary School- (Age 5-12)	FY 2026
Jeffers Hill Elementary School (Age (5-12)	FY 2026
Thunder Hill Elementary School (Age 5-12)	FY 2026
Running Brook Elementary School (Age 5-12)	FY 2027
St John's Lane Elementary School ( Ages 5-12)	FY 2027
West Friendship Elementary School (Ages (5-12)	FY 2027
Bellows Springs Elementary School (Age 5-12)	FY 2028
Bollman Bridge Elementary School ( Age 5-12)	FY 2028
Forest Ridge Elementary School ( Age 5-12)	FY 2028
Pointers Run Elementary School (Age 5-12)	FY 2029
Rockburn Elementary School (Age 5-12)	FY 2029
Phelps Luck Elementary School (Age 5-12)	FY 2029
Atholton Elementary School (Age 5-12)	FY 2030
Fulton Elementary School (Age 5-12)	FY 2030
Lisbon Elementary School (Age 5-12)	FY 2030



The chart seen to the left shows the estimated funding requirements based upon the long-term plan listed above. Advancing or delaying some projects may help to smooth the funding profile but the graph shows that present funding levels will not be sufficient with future requirements. Risk management and purchasing staff are exploring different bidding methods with standard design options, which may save on design costs.

## Relocatable Classrooms: Project 1045



### Project Purpose

The Relocatable Classrooms project provides funds for the relocation and repairs of existing relocatable classrooms or purchase of new portable classrooms to be placed at schools in need of additional capacity. Relocation includes moving the structures as well as the installation of support services that make the portable structures functional classrooms. Additional classroom spaces are needed to help relieve overcapacity schools until permanent classroom spaces are available.

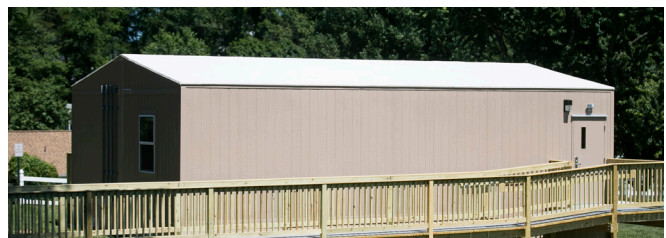
### FY 2022 Request Analysis

Project Funding (July 1, 2019 - June 30, 2021)	\$	6,500,000
Project Cost-to-Date (through June 30, 2020)		(4,698,905)
FY 2021 Projected Costs/Encumbrances		(1,801,095)
Available Project Funding (July 1, 2021)	\$	-
Requested Budget FY 2022	\$	1,500,000

### Relocatable Classrooms Actual Expenses

Fiscal Year	Actual Expense
FY 2016	\$ 1,322,547
FY 2017	\$ 661,112
FY 2018	\$ 1,888,241
FY 2019	\$ 2,235,775
FY 2020	\$ 2,535,833

The School Planning Office evaluates relocatable classroom needs annually in a report to the Board of Education. After a decision is made, School Construction oversees the placing and connecting of all HCPSS relocatables. Actual costs incurred in the Relocatable Classrooms project over the past five years is shown above.





## Project Details

As of September 2020 there are 234 relocatable/modular classrooms in use (four are used for administrative purposes at the Central Office, all others are at school sites).

In some cases modular units are integrated into a building's core facility. These units are in use at St. John's Lane Elementary School and Clarksville Middle School. These units are included in building capacity because they are considered permanent additions. In recent renovations at Bollman Bridge Elementary School, Deep Run Elementary School and Patuxent Valley Middle School, modular units were replaced.

The school system conducts regular reviews of the physical condition and usage of all relocatable/modular units. When units are inspected, the cost of repairs is weighed against the option of retiring the units. Cycling out, and even reducing the inventory, can create operating economies. The potential to either take relocatables out-of-service, transport them to other locations where needed, or place them in excess to dispose of in an appropriate manner will be decided annually. However, any dramatic reduction of inventory would require a considerable investment in brick and mortar construction.





## Site Acquisition and Construction Reserve: Project 1047



### Project Purpose

The Site Acquisition and Construction Reserve project is needed as a contingency reserve providing funds for use on an as-needed basis. Site funds are needed for future enrollment growth. This account is also a contingency fund for school construction at various school sites. The county government is currently negotiating the purchase of a future school site that will be purchased directly by the county.

### Site Acquisition/Construction Reserve Actual Expenses

Fiscal Year	Actual Expense
FY 2016	\$ 3,704
FY 2017	\$ 607,123
FY 2018	\$ 1,103,937
FY 2019	\$ 333,998
FY 2020	\$ 648,767



The School Construction Office oversees the Site Acquisition and Construction Reserve Project. Actual costs incurred in the Site Acquisition and Construction Reserve Project over the past five years is above. Funding has been limited in the last several years.

## Project Details

This fund is for site acquisition. The selection and acquisition of appropriate school sites is integral to the development of a capital program. Each proposed school site is carefully evaluated prior to acquisition according to Board-approved selection criteria identified in Policy 6000 Site Selection and Acquisition.

Delays in acquisition of suitable school sites affect the timing of construction of needed schools. This can result in extended periods of crowding. In an effort to reduce such delays, the HCPSS continues to maintain a "land bank" that will be called upon to pursue the purchase of potential sites or portions of land to augment sites.

Larger sites identified in the subdivision review process may be reserved to be budgeted as line items in future capital budgets. The state of Maryland regulates but does not pay the costs for site acquisitions; therefore, funds for the purchase of school sites are provided locally by the Howard County Government.

This fund also serves as a construction reserve. Capital planning has been fairly accurate and overruns have been minimal so the actual use of the majority of this fund has been to acquire land. In the past, initial pre-planning expenses have been charged to this account, but the FY 2016 Capital Budget introduced Planning and Design as a separate project request.





## Technology: Project 1048



### Project Purpose

Technology project funds are required for replacements and continuous improvements to HCPSS infrastructure, technology systems and applications to ensure that instruction and business needs are met in a secure, standard, and equitable manner. Key projects include the telecommunication system replacement, enterprise infrastructure upgrades, cybersecurity improvements, classroom technologies updates, and migrating system and applications from inhouse to cloud infrastructure.



### Technology Actual Expenses

Fiscal Year	Actual Expense
FY 2016	\$ 5,559,784
FY 2017	\$ 458,965
FY 2018	\$ 6,109,668
FY 2019	\$ 2,464,456
FY 2020	\$ 405,982

### FY 2022 Request Analysis

Project Funding (July 1, 2019 - June 30, 2021)	\$ 7,500,000
Project Cost-to-Date (through June 30, 2020)	(954,919)
FY 2021 Projected Costs/Encumbrances	(6,545,081)
Available Project Funding (July 1, 2021)	\$ -
Requested Budget FY 2022	\$ 3,750,000

The Department of Information Technology oversees the Technology project, and supports and maintains all enterprise technology infrastructure, computer systems and applications. Actual costs incurred in the Technology project over the past five years are below.



## Project Details

### Telecommunication System Replacement

The HCPSS telecommunication system needs to be replaced with a unified systemwide telecommunication system that meets current technology and security standards; and is reliable, accessible, and supports the safety of students and staff. While HCPSS has deferred the replacement of the phone system several times due to lack of funding, the project can no longer be delayed. Verizon has sent HCPSS notification of the pending termination of Centric ("copper") service for the past four years. Hence it is imperative that HCPSS continues and finishes the replacement of the phone system



### Cybersecurity Improvements

HCPSS has deferred upgrades to technology security operations and systems for several years due to budget constraints. With the increase of cyberattacks and ransomware targeting school systems and government agencies, HCPSS needs to improve its technology security posture. Several important cybersecurity initiatives will be implemented to mitigate risks to our students, staff, parents, and community members. These projects will enhance the district's ability to prevent, identify, respond to, and recover from cyberattacks.

### Classroom Technology Updates

The majority of classroom technologies across the district are approaching the end of their usable life. These technologies include AV devices, and specialized and general-purpose computers that are frequently broken, needing parts and functionally running slowly, resulting in a loss of instructional time and limiting student access to technology. Classroom technologies are essential for providing equitable instructional opportunities that support teachers as they provide students opportunities to master technology literacy standards and gain college and career ready skills and knowledge.

### Enterprise Infrastructure Upgrades

Enterprise Infrastructure refers to the entire collection of computers, audio visual equipment, networks, Wi-Fi equipment, servers, switches, supporting software and other related hardware equipment in schools and offices. These items, along with supporting services such as installation, monitoring, maintenance, and repairs, provide the backbone for a high performing learning community. Infrastructure hardware is a significant portion of any technology budget and must be refreshed on a cyclical basis.

### Enterprise Applications

Enterprise Applications provide the system-wide information for the operation and benefit of our program directors, administrators, teachers, students, and parents. Enterprise Applications governs the operations of each of the major data systems: Student Information System (Synergy), Data Warehouse (Hoonuit), Learning Management System (Canvas), and our cloud-based Financial Management, Budgeting, and Human Capital Management System (Workday). Migrating enterprise applications, as appropriate, from servers in the district's data center to cloud service providers eliminates the need for construction and maintenance of expensive onsite infrastructure. Applications, data, and other content are no longer needed to be stored in local servers, but instead all the resources are available and delivered to users on demand, anytime and anywhere. Cloud systems can reliably handle usage spikes and are easier to keep up to date.

## School Parking Lot Expansions: Project 1012



### Parking Lot Expansion Actual Expenses

Fiscal Year	Actual Expense
FY 2016	\$ -
FY 2017	\$ -
FY 2018	\$ 92,000
FY 2019	\$ 160,427
FY 2020	\$ 348,060

School Facilities oversees the School Parking Lot Expansions Project. Actual costs incurred in the School Parking Lot Expansions Project over the past five years is shown above. Due to funding constraints, requests for this project have been deferred until future years.

### Project Purpose

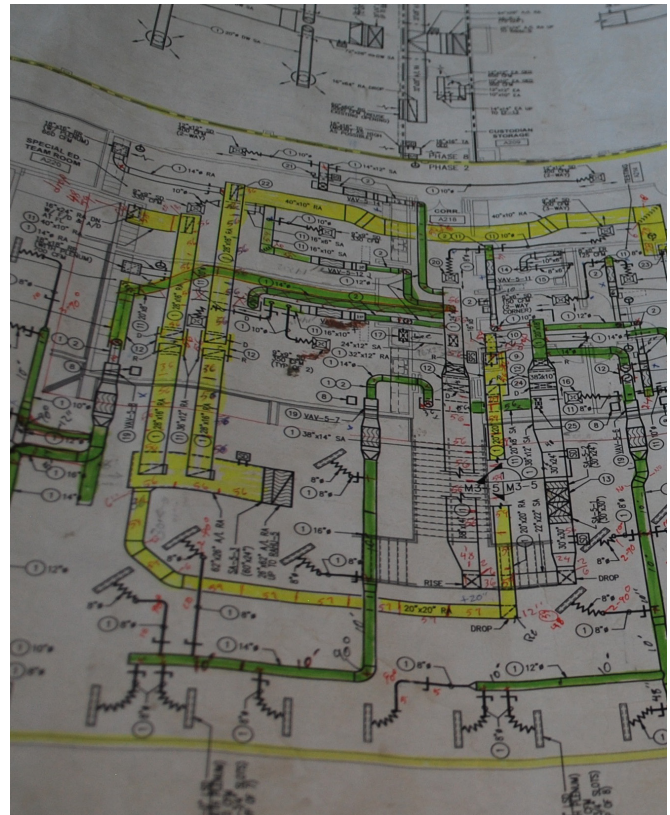
School Parking Lot Expansion projects provide for the construction of additional parking spaces and modification of parking lots to improve traffic flow patterns at existing school sites. These projects are necessary due to the insufficient supply of spaces to meet existing needs. Funds are used for parking improvements on sites that are not scheduled for other construction projects.

### FY 2022 Request Analysis

Project Funding (July 1, 2019 - June 30, 2021)	\$ 4,200,370
Project Cost-to-Date (through June 30, 2020)	(4,181,251)
FY 2021 Projected Costs/Encumbrances	(19,119)
Available Project Funding (July 1, 2021)	\$ -
Requested Budget FY 2022	\$ 600,000





[illegible]

The value of these studies is having the flexibility to ask technical questions about projects before the formal design process. With these studies, projects can be “right sized.” Pricing for these studies is favorable because design consultants want to obtain the full design project. These studies ensure the selection of the most effective scope for each project. This process will reduce the costs associated with significant changes in scope, which often occur in a compressed planning schedule. In the construction phase, the reduced number of change orders will lessen the impact on the construction schedule and decrease incremental costs. Future year studies may include out-year

The West Friendship ES septic expansion study is one example of a project that would be allocated funds from this budget line for planning and design.



## Barrier-Free Projects: Project 0989



An accessibility ramp to access the upper level play area at Bryant Woods Elementary School.

### Project Purpose

Barrier-Free Projects include modifications to make all spaces at school facilities accessible to the public, students, teachers, and staff. Federal, state, and local regulations require that school facilities be made accessible to the physically handicapped by removing barriers to access. Projects within the Barrier-Free fund include stadium bleacher ramps, play field access ramps, automatic door opening devices, reconfiguration of bathroom fixtures, alterations of drinking fountains and partitions to allow wheelchair access, and other school-specific projects that remove barriers as described in project details.

Barrier Free Actual Expenses	
Fiscal Year	Actual Expense
FY 2016	\$ 54,747
FY 2017	\$ 234,811
FY 2018	\$ 316,622
FY 2019	\$ 181,825
FY 2020	\$ 199,390

School Facilities oversees the Barrier-Free Projects. Actual costs incurred in the Barrier-Free Projects over the past five years is shown above.



Lift room for access to the stage.

### FY 2022 Request Analysis

Project Funding (July 1, 2019 - June 30, 2021)	\$ 5,953,000
Project Cost-to-Date (through June 30, 2020)	(5,754,802)
FY 2021 Projected Costs/Encumbrances	(198,198)
Available Project Funding (July 1, 2021)	\$ -
Requested Budget FY 2022	\$ 200,000

## Project Details

The Americans with Disabilities Act (ADA) of 1990 is a comprehensive civil rights law that makes it unlawful for public and private employers to discriminate against individuals with disabilities. This law, as well as COMAR, and best risk management practices require that HCPSS be ready to adjust our physical plant for access. Funds support student needs and compliance with existing and new regulations as they relate to the ADA to ensure all students and staff have equal opportunities.

The barrier-free fund ensures our facilities provide full access to all students. When buildings are designed with accessibility in mind, issues are addressed in the schematic phase of a project. This practice generally produces buildings that are more accessible at the best cost.

With changing student enrollments, unique access issues may arise after the building is completed. This fund is used to make sensible, low-cost adjustments to improve overall access. This project funding is ongoing.

Annually, between two and four handicap door operators are replaced.



Elevator for transportation to the second-story level.







Superintendent's Proposed FY 2022 Capital Budget  
Capital Improvement Program FY 2023–2027  
Long-Range Master Plan FY 2022–2031

Section 4

# Supporting Data

September 2020

## Pre-Measures

## ELEMENTARY SCHOOLS - Data for Demonstrative Purposes Only

Capacity Utilization Rates with Board of Education's Requested FY 2021 Capital Budget Projects - Not Test for APFO

Chart reflects May 2020 Projections, Board of Education's FY 2021 requested capacities, and boundary adjustments approved by the Board of Education on November 21, 2019 for School Year 2020-21.

School	2020	2021	2022	2023	2024	Capacity	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
							Proj % Util.	Proj % Util.	Proj % Util.	Proj % Util.	Proj % Util.	Proj % Util.	Proj % Util.	Proj % Util.	Proj % Util.	Proj % Util.	Proj % Util.
Atholton ES	424	424	424	424	424		486 114.6	481 113.4	474 111.8	480 113.2	476 112.3	473 111.6	475 112.0	476 112.3	476 112.3	478 112.7	479 113.0
Bellows Spring ES	726	726	726	726	726		616 84.8	635 87.5	653 89.9	671 92.4	736 101.4	784 108.0	822 113.2	849 116.9	879 121.1	888 122.3	846 116.5
Bollman Bridge ES	666	666	666	666	666		694 104.2	703 105.6	701 105.3	727 109.2	736 110.5	749 112.5	762 114.4	763 114.6	769 115.5	776 116.5	795 119.4
Bryant Woods ES	361	361	361	361	361		422 116.9	440 121.9	460 127.4	492 136.3	493 136.6	510 141.3	519 143.8	534 147.9	547 151.5	561 155.4	576 159.6
Bushy Park ES	725	725	725	725	725		593 81.8	569 78.5	576 79.4	562 77.5	560 77.2	547 75.4	546 75.3	553 76.3	553 76.3	573 79.0	593 81.8
Centennial Lane ES	647	647	647	647	647		690 106.6	683 105.6	688 106.3	692 107.0	677 104.6	684 105.7	677 104.6	672 103.9	666 102.9	656 101.4	652 100.8
Clarksville ES	543	543	543	543	543		558 102.8	610 112.3	628 115.7	626 115.3	626 115.3	618 113.8	620 114.2	625 115.1	626 115.3	630 116.0	631 116.2
Clemens Crossing ES	521	521	521	521	521		548 105.2	567 108.8	552 106.0	556 106.7	555 106.5	573 110.0	593 113.8	610 117.1	623 119.6	626 120.2	623 119.6
Cradlerock ES	398	398	398	398	398		437 109.8	440 110.6	449 112.8	453 113.8	463 116.3	466 117.1	492 123.6	513 128.9	520 130.7	544 136.7	560 140.7
Dayton Oaks ES	700	700	700	700	700		644 92.0	660 94.3	668 95.4	672 96.0	695 99.3	690 98.6	682 97.4	670 95.7	657 93.9	643 91.9	644 92.0
Deep Run ES	750	750	750	750	750		702 93.6	723 96.4	748 99.7	735 98.0	726 96.8	754 100.5	750 100.0	771 102.8	788 105.1	821 109.5	844 112.5
Ducketts Lane ES	650	650	650	650	650		590 90.8	594 91.4	567 87.2	541 83.2	501 77.1	502 77.2	485 74.6	490 75.4	489 75.2	508 78.2	545 83.8
Elkridge ES	760	760	760	760	760		821 108.0	836 110.0	834 109.7	853 112.2	857 112.8	854 112.4	876 115.3	921 121.2	919 120.9	935 123.0	948 124.7
Forest Ridge ES	713	713	713	713	713		690 96.8	703 98.6	716 100.4	749 105.0	793 111.2	823 115.4	881 123.6	934 131.0	994 139.4	1039 145.7	1062 148.9
Fulton ES	826	826	826	826	826		864 104.6	875 105.9	884 107.0	877 106.2	861 104.2	830 100.5	825 99.9	798 96.6	773 93.6	762 92.3	752 91.0
Gorman Crossing ES	735	735	735	735	735		801 109.0	829 112.8	833 113.3	811 110.3	806 109.7	787 107.1	757 103.0	732 99.6	741 100.8	740 100.7	731 99.5
Guilford ES	465	465	465	465	465		504 108.4	509 109.5	510 109.7	521 112.0	508 109.2	505 108.6	521 112.0	549 118.1	558 120.0	556 119.6	551 118.5
Hammond ES	653	653	653	653	653		724 110.9	720 110.3	727 111.3	741 113.5	783 119.9	838 128.3	856 131.1	896 137.2	944 144.6	1000 153.1	1035 158.5
Hanover Hills ES	810	810	810	810	810		733 90.5	771 95.2	818 101.0	840 103.7	911 112.5	958 118.3	995 122.8	1004 124.0	1004 124.0	1000 123.5	971 119.9
Hollifield Station ES	732	732	732	732	732		781 106.7	789 107.8	798 109.0	789 107.8	789 107.8	767 104.8	751 102.6	726 99.2	709 96.9	696 95.1	714 97.5
Ilchester ES	584	584	584	584	584		552 94.5	532 91.1	546 93.5	541 92.6	546 93.5	564 96.6	574 98.3	580 99.3	600 102.7	602 103.1	605 103.6
Jeffers Hill ES	421	421	421	421	421		413 98.1	397 94.3	368 87.4	367 87.2	357 84.8	359 85.3	365 86.7	374 88.8	383 91.0	398 94.5	407 96.7
Laurel Woods ES	609	609	609	609	609		593 97.4	606 99.5	609 100.0	600 98.5	602 98.9	591 97.0	590 96.9	589 96.7	587 96.4	597 98.0	596 97.9
Lisbon ES	527	527	527	527	527		451 85.6	466 88.4	473 89.8	480 91.1	471 89.4	462 87.7	450 85.4	456 86.5	477 90.5	489 92.8	497 94.3
Longfellow ES	512	512	512	512	512		485 94.7	499 97.5	493 96.3	497 97.1	491 95.9	509 99.4	515 100.6	524 102.3	539 105.3	543 106.1	554 108.2
Manor Woods ES	681	681	681	681	681		747 109.7	770 113.1	782 114.8	825 121.1	813 119.4	829 121.7	846 124.2	850 124.8	850 124.8	840 123.3	851 125.0
New ES #43	NS	0	0	0	0												
New ES #44	NS	0	0	0	0												
Northfield ES	700	700	700	700	700		783 111.9	770 110.0	756 108.0	754 107.7	755 107.9	749 107.0	747 106.7	747 106.7	742 106.0	741 105.9	736 105.1
Phelps Luck ES	597	597	597	597	597		659 110.4	687 115.1	673 112.7	672 112.6	645 108.0	650 108.9	647 108.4	648 108.5	681 114.1	685 114.7	714 119.6
Pointers Run ES	744	744	744	744	744		793 106.6	788 105.9	805 108.2	832 111.8	810 108.9	793 106.6	767 103.1	743 99.9	718 96.5	698 93.8	688 92.5
Rockburn ES	584	584	584	584	584		599 102.6	623 106.7	631 108.0	651 111.5	680 116.4	695 119.0	721 123.5	744 127.4	775 132.7	809 138.5	805 137.8
Running Brook ES	515	515	515	515	515		427 82.9	442 85.8	455 88.3	462 89.7	494 95.9	529 102.7	533 103.5	545 105.8	559 108.5	575 111.7	592 115.0
St Johns Lane ES	612	612	612	612	612		686 112.1	692 113.1	699 114.2	709 115.8	713 116.5	707 115.5	709 115.8	705 115.2	701 114.5	717 117.2	714 116.7
Stevens Forest ES	380	380	380	380	380		336 88.4	324 85.3	316 83.2	320 84.2	318 83.7	322 84.7	322 84.7	322 84.7	321 84.5	320 84.2	319 83.9
Swansfield ES	694	694	694	694	694		534 78.9	574 82.7	591 85.2	601 86.6	616 88.8	648 93.4	673 97.0	701 101.0	737 106.2	770 111.0	790 113.8
Talbot Springs ES	R 377	377	540	540	540		466 123.6	460 122.0	453 83.9	441 81.7	433 80.2	436 80.7	441 81.7	453 83.9	460 85.2	476 88.1	490 90.7
Thunder Hill ES	509	509	509	509	509		513 100.8	510 100.2	511 100.4	502 98.6	493 96.9	484 95.1	482 94.7	489 96.1	490 96.3	497 97.6	507 99.6
Triadelphia Ridge ES	606	606	606	606	606		540 89.1	532 87.8	533 88.0	526 86.8	514 84.8	525 86.6	537 88.6	541 89.3	542 89.4	532 87.8	520 85.8
Veterans ES	799	799	799	799	799		912 114.1	906 113.4	915 114.5	930 116.4	952 119.1	963 120.5	970 121.4	965 120.8	963 120.5	956 119.6	954 119.4
Waterloo ES	603	603	603	603	603		597 99.0	590 97.8	588 97.5	580 96.2	598 99.2	595 98.7	592 98.2	598 99.2	594 98.5	598 99.2	596 98.8
Waverly ES	788	788	788	788	788		864 109.6	863 109.5	856 108.6	864 109.6	867 110.0	877 111.3	868 110.2	864 109.6	897 113.8	912 115.7	907 115.1
West Friendship ES	414	414	414	414	414		397 95.9	391 94.4	397 95.9	401 96.9	398 96.1	423 102.2	435 105.1	433 104.6	431 104.1	428 103.4	421 101.7
Worthington ES	515	515	515	515	515		460 89.3	445 86.4	452 87.8	456 88.5	474 92.0	500 97.1	522 101.4	547 106.2	565 109.7	573 111.3	565 109.7
<b>Countywide Totals</b>	<b>25576</b>	<b>25576</b>	<b>25739</b>	<b>25739</b>	<b>25739</b>		<b>25705 100.5</b>	<b>26004 101.7</b>	<b>26186 101.7</b>	<b>26399 102.6</b>	<b>26592 103.3</b>	<b>26922 104.6</b>	<b>27191 105.6</b>	<b>27504 104.4</b>	<b>27847 105.7</b>	<b>28188 107.0</b>	<b>28380 107.7</b>

'A' includes additions as reflected in FY 2021 CIP for grades K-5

'NS' New School proposed in FY 2021 Capital Budget

'R' Replacement School proposed in FY 2021 Capital Budget

Color coding has been updated to align with the definition of target utilization (between 90-110% utilization) as outlined in Policy 6010. Blue is under target utilization, green is within target utilization and red is over target utilization.

Post-Measures

**ELEMENTARY SCHOOLS - Data for Demonstrative Purposes Only****Board Approved SY 2020-21 Boundaries**

Capacity Utilization Rates with Proposed FY 2022 Capital Budget Projects - Not Test for APFO

Chart reflects May 2020 Projections, potential FY 2022 requested capacities and boundary adjustments approved by the Board of Education on November 21, 2019 for School Year 2020-21.

Capacity					2021-22		2022-23		2023-24		2024-25		2025-26		2026-27		2027-28		2028-29		2029-30		2030-31	
School	2021	2022	2023	2024	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.
Atholton ES	424	424	424	424	481	113.4	474	111.8	480	113.2	476	112.3	473	111.6	475	112.0	476	112.3	476	112.3	478	112.7	479	113.0
Bellows Spring ES	726	726	726	726	635	87.5	653	89.9	671	92.4	736	101.4	784	108.0	822	113.2	849	116.9	879	121.1	888	122.3	846	116.5
Bollman Bridge ES	666	666	666	666	703	105.6	701	105.3	727	109.2	736	110.5	749	112.5	762	114.4	763	114.6	769	115.5	776	116.5	795	119.4
Bryant Woods ES	361	361	361	361	440	121.9	460	127.4	492	136.3	493	136.6	510	141.3	519	143.8	534	147.9	547	151.5	561	155.4	576	159.6
Bushy Park ES	788	788	788	788	569	72.2	576	73.1	562	71.3	560	71.1	547	69.4	546	69.3	553	70.2	553	70.2	573	72.7	593	75.3
Centennial Lane ES	647	647	647	647	683	105.6	688	106.3	692	107.0	677	104.6	684	105.7	677	104.6	672	103.9	666	102.9	656	101.4	652	100.8
Clarksville ES	543	543	543	543	610	112.3	628	115.7	626	115.3	626	115.3	618	113.8	620	114.2	625	115.1	626	115.3	630	116.0	631	116.2
Clemens Crossing ES	521	521	521	521	567	108.8	552	106.0	556	106.7	555	106.5	573	110.0	593	113.8	610	117.1	623	119.6	626	120.2	623	119.6
Cradlerock ES	398	398	398	398	440	110.6	449	112.8	453	113.8	463	116.3	466	117.1	492	123.6	513	128.9	520	130.7	544	136.7	560	140.7
Dayton Oaks ES	700	700	700	700	660	94.3	668	95.4	672	96.0	695	99.3	690	98.6	682	97.4	670	95.7	657	93.9	643	91.9	644	92.0
Deep Run ES	769	769	769	769	723	94.0	748	97.3	735	95.6	726	94.4	754	98.0	750	97.5	771	100.3	788	102.5	821	106.8	844	109.8
Ducketts Lane ES	650	650	650	650	594	91.4	567	87.2	541	83.2	501	77.1	502	77.2	485	74.6	490	75.4	489	75.2	508	78.2	545	83.8
Elkridge ES	760	760	760	760	836	110.0	834	109.7	853	112.2	857	112.8	854	112.4	876	115.3	921	121.2	919	120.9	935	123.0	948	124.7
Forest Ridge ES	691	691	691	691	703	101.7	716	103.6	749	108.4	793	114.8	823	119.1	881	127.5	934	135.2	994	143.8	1039	150.4	1062	153.7
Fulton ES	757	757	757	757	875	115.6	884	116.8	877	115.9	861	113.7	830	109.6	825	109.0	798	105.4	773	102.1	762	100.7	752	99.3
Gorman Crossing ES	735	735	735	735	829	112.8	833	113.3	811	110.3	806	109.7	787	107.1	757	103.0	732	99.6	741	100.8	740	100.7	731	99.5
Guilford ES	465	465	465	465	509	109.5	510	109.7	521	112.0	508	109.2	505	108.6	521	112.0	549	118.1	558	120.0	556	119.6	551	118.5
Hammond ES	653	653	653	653	720	110.3	727	111.3	741	113.5	783	119.9	838	128.3	856	131.1	896	137.2	944	144.6	1000	153.1	1035	158.5
Hanover Hills ES	829	829	829	829	771	93.0	818	98.7	840	101.3	911	109.9	958	115.6	995	120.0	1004	121.1	1004	121.1	1000	120.6	971	117.1
Hollifield Station ES	732	732	732	732	789	107.8	798	109.0	789	107.8	789	107.8	767	104.8	751	102.6	726	99.2	709	96.9	696	95.1	714	97.5
Ilchester ES	584	584	584	584	532	91.1	546	93.5	541	92.6	546	93.5	564	96.6	574	98.3	580	99.3	600	102.7	602	103.1	605	103.6
Jeffers Hill ES	421	421	421	421	397	94.3	368	87.4	367	87.2	357	84.8	359	85.3	365	86.7	374	88.8	383	91.0	398	94.5	407	96.7
Laurel Woods ES	609	609	609	609	606	99.5	609	100.0	600	98.5	602	98.9	591	97.0	590	96.9	589	96.7	587	96.4	597	98.0	596	97.9
'NS' New School proposed	527	527	527	527	466	88.4	473	89.8	480	91.1	471	89.4	462	87.7	450	85.4	456	86.5	477	90.5	489	92.8	497	94.3
Longfellow ES	512	512	512	512	499	97.5	493	96.3	497	97.1	491	95.9	509	99.4	515	100.6	524	102.3	539	105.3	543	106.1	554	108.2
Manor Woods ES	681	681	681	681	770	113.1	782	114.8	825	121.1	813	119.4	829	121.7	846	124.2	850	124.8	850	124.8	840	123.3	851	125.0
New ES #43 NS	0	0	0	0																				
Northfield ES	700	700	700	700	770	110.0	756	108.0	754	107.7	755	107.9	749	107.0	747	106.7	747	106.7	742	106.0	741	105.9	736	105.1
Phelps Luck ES	597	597	597	597	687	115.1	673	112.7	672	112.6	645	108.0	650	108.9	647	108.4	648	108.5	681	114.1	685	114.7	714	119.6
Pointers Run ES	744	744	744	744	788	105.9	805	108.2	832	111.8	810	108.9	793	106.6	767	103.1	743	99.9	718	96.5	698	93.8	688	92.5
Rockburn ES	584	584	584	584	623	106.7	631	108.0	651	111.5	680	116.4	695	119.0	721	123.5	744	127.4	775	132.7	809	138.5	805	137.8
Running Brook ES	515	515	515	515	442	85.8	455	88.3	462	89.7	494	95.9	529	102.7	533	103.5	545	105.8	559	108.5	575	111.7	592	115.0
St Johns Lane ES	612	612	612	612	692	113.1	699	114.2	709	115.8	713	116.5	707	115.5	709	115.8	705	115.2	701	114.5	717	117.2	714	116.7
Stevens Forest ES	380	380	380	380	324	85.3	316	83.2	320	84.2	318	83.7	322	84.7	322	84.7	322	84.7	321	84.5	320	84.2	319	83.9
Swansfield ES	672	672	672	672	574	85.4	591	87.9	601	89.4	616	91.7	648	96.4	673	100.1	701	104.3	737	109.7	770	114.6	790	117.6
Talbot Springs ES R	377	540	540	540	460	122.0	453	83.9	441	81.7	433	80.2	436	80.7	441	81.7	453	83.9	460	85.2	476	88.1	490	90.7
Thunder Hill ES	509	509	509	509	510	100.2	511	100.4	502	98.6	493	96.9	484	95.1	482	94.7	489	96.1	490	96.3	497	97.6	507	99.6
Triadelphia Ridge ES	584	584	584	584	532	91.1	533	91.3	526	90.1	514	88.0	525	89.9	537	92.0	541	92.6	542	92.8	532	91.1	520	89.0
Veterans ES	799	799	799	799	906	113.4	915	114.5	930	116.4	952	119.1	963	120.5	970	121.4	965	120.8	963	120.5	956	119.6	954	119.4
Waterloo ES	603	603	603	603	590	97.8	588	97.5	580	96.2	598	99.2	595	98.7	592	98.2	598	99.2	594	98.5	598	99.2	596	98.8
Waverly ES	788	788	788	788	863	109.5	856	108.6	864	109.6	867	110.0	877	111.3	868	110.2	864	109.6	897	113.8	912	115.7	907	115.1
West Friendship ES	414	414	414	414	391	94.4	397	95.9	401	96.9	398	96.1	423	102.2	435	105.1	433	104.6	431	104.1	428	103.4	421	101.7
Worthington ES	468	468	468	468	445	95.1	452	96.6	456	97.4	474	101.3	500	106.8	522	111.5	547	116.9	565	120.7	573	122.4	565	120.7
<b>Countywide Totals</b>	<b>25495</b>	<b>25658</b>	<b>25658</b>	<b>25658</b>	<b>26004</b>	<b>102.0</b>	<b>26186</b>	<b>102.1</b>	<b>26399</b>	<b>102.9</b>	<b>26592</b>	<b>103.6</b>	<b>26922</b>	<b>104.9</b>	<b>27191</b>	<b>106.0</b>	<b>27504</b>	<b>107.2</b>	<b>27847</b>	<b>105.3</b>	<b>28188</b>	<b>106.6</b>	<b>28380</b>	<b>107.3</b>

'A' includes additions as proposed for FY 2022 CIP for grades K-5

'NS' New School proposed for FY 2022 Capital Budget

'R' Replacement School proposed for FY 2022 Capital Budget

Color coding has been updated to align with the definition of target utilization (between 90-110% utilization) as outlined in Policy 6010. Blue is under target utilization, green is within target utilization and red is over target utilization.



Pre-Measures

**MIDDLE SCHOOLS - Data for Demonstrative Purposes Only**

Capacity Utilization Rates with Board of Education's Requested FY 2021 Capital Budget Projects - Not Test for APFO

Chart reflects May 2020 Projections, Board of Education's FY 2021 requested capacities, and boundary adjustments approved by the Board of Education on November 21, 2019 for School Year 2020-21.

Capacity						2020-21		2021-22		2022-23		2023-24		2024-25		2025-26		2026-27		2027-28		2028-29		2029-30		2030-31	
School	2020	2021	2022	2023	2024	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.
Bonnie Branch MS	701	701	701	701	701	713	101.7	693	98.9	698	99.6	714	101.9	733	104.6	722	103.0	725	103.4	709	101.1	717	102.3	712	101.6	716	102.1
Burleigh Manor MS	779	779	779	779	779	871	111.8	882	113.2	888	114.0	852	109.4	858	110.1	839	107.7	855	109.8	830	106.5	840	107.8	838	107.6	846	108.6
Clarksville MS	643	643	643	643	643	713	110.9	697	108.4	670	104.2	653	101.6	692	107.6	709	110.3	734	114.2	726	112.9	729	113.4	719	111.8	711	110.6
Dunloggin MS	A 565	565	565	565	565	621	109.9	627	111.0	631	111.7	633	112.0	616	109.0	616	109.0	614	108.7	623	110.3	617	93.2	618	93.4	617	93.2
Elkridge Landing MS	779	779	779	779	779	727	93.3	718	92.2	754	96.8	762	97.8	787	101.0	798	102.4	841	108.0	867	111.3	878	112.7	868	111.4	899	115.4
Ellicott Mills MS	701	701	701	701	701	785	112.0	725	103.4	678	96.7	693	98.9	688	98.1	700	99.9	706	100.7	703	100.3	688	98.1	677	96.6	691	98.6
Folly Quarter MS	662	662	662	662	662	720	108.8	758	114.5	766	115.7	775	117.1	789	119.2	788	119.0	791	119.5	779	117.7	788	119.0	781	118.0	785	118.6
Glenwood MS	545	545	545	545	545	514	94.3	492	90.3	463	85.0	477	87.5	478	87.7	497	91.2	494	90.6	494	90.6	493	90.5	501	91.9	503	92.3
Hammond MS	604	604	604	604	604	689	114.1	725	120.0	819	135.6	798	132.1	817	135.3	822	136.1	855	141.6	849	140.6	867	143.5	855	141.6	888	147.0
Harpers Choice MS	506	506	506	506	506	475	93.9	451	89.1	427	84.4	431	85.2	470	92.9	456	90.1	465	91.9	459	90.7	468	92.5	467	92.3	472	93.3
Lake Elkhorn MS	643	643	643	643	643	586	91.1	546	84.9	532	82.7	518	80.6	531	82.6	521	81.0	524	81.5	510	79.3	509	79.2	506	78.7	514	79.9
Lime Kiln MS	721	721	721	721	721	671	93.1	678	94.0	713	98.9	743	103.1	762	105.7	789	109.4	808	112.1	825	114.4	811	112.5	788	109.3	756	104.9
Mayfield Woods MS	798	798	798	798	798	837	104.9	826	103.5	809	101.4	809	101.4	843	105.6	843	105.6	876	109.8	873	109.4	896	112.3	857	107.4	893	111.9
Mount View MS	798	798	798	798	798	870	109.0	974	122.1	1010	126.6	997	124.9	988	123.8	1003	125.7	1053	132.0	1039	130.2	1037	129.9	1033	129.4	1034	129.6
Murray Hill MS	662	662	662	662	662	714	107.9	668	100.9	658	99.4	679	102.6	706	106.6	726	109.7	719	108.6	735	111.0	720	108.8	703	106.2	684	103.3
Oakland Mills MS	A 506	506	506	506	506	509	100.6	513	101.4	527	104.2	521	103.0	526	104.0	514	101.6	522	103.2	502	99.2	502	99.2	490	96.8	491	74.2
Patapsco MS	643	643	643	643	643	707	110.0	690	107.3	717	111.5	730	113.5	744	115.7	754	117.3	753	117.1	769	119.6	760	118.2	760	118.2	745	115.9
Patuxent Valley MS	760	760	760	760	760	800	105.3	814	107.1	821	108.0	799	105.1	792	104.2	805	105.9	848	111.6	887	116.7	896	117.9	903	118.8	914	120.3
Thomas Viaduct MS	701	701	701	701	701	810	115.5	918	131.0	888	126.7	911	130.0	906	129.2	919	131.1	918	131.0	931	132.8	952	135.8	979	139.7	1035	147.6
Wilde Lake MS	721	721	721	721	721	676	93.8	669	92.8	677	93.9	708	98.2	765	106.1	769	106.7	794	110.1	793	110.0	821	113.9	820	113.7	835	115.8
<b>Countywide Totals</b>	13438	13438	13438	13438	13438	14008	104.2	14064	104.7	14146	105.3	14203	105.7	14491	107.8	14590	108.6	14895	110.8	14903	110.9	14989	110.7	14875	109.9	15029	109.8

\*A\* includes additions as reflected in FY 2021 CIP for grades 6-8

Color coding has been updated to align with the definition of target utilization (between 90-110% utilization) as outlined in Policy 6010. Blue is under target utilization, green is within target utilization and red is over target utilization.

Post-Measures

Board Approved SY 2020-21 Boundaries

## MIDDLE SCHOOLS - Data for Demonstrative Purposes Only

Capacity Utilization Rates with Proposed FY 2022 Capital Budget Projects - Not Test for APFO

Chart reflects May 2020 Projections, potential FY 2022 requested capacities and boundary adjustments approved by the Board of Education on November 21, 2019 for School Year 2020-21.

School	Capacity				2021-22		2022-23		2023-24		2024-25		2025-26		2026-27		2027-28		2028-29		2029-30		2030-31	
	2021	2022	2023	2024	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.
Bonnie Branch MS	701	701	701	701	693	98.9	698	99.6	714	101.9	733	104.6	722	103.0	725	103.4	709	101.1	717	102.3	712	101.6	716	102.1
Burleigh Manor MS	779	779	779	779	882	113.2	888	114.0	852	109.4	858	110.1	839	107.7	855	109.8	830	106.5	840	107.8	838	107.6	846	108.6
Clarksville MS	643	643	643	643	697	108.4	670	104.2	653	101.6	692	107.6	709	110.3	734	114.2	726	112.9	729	113.4	719	111.8	711	110.6
Dunloggin MS	A 565	565	565	565	627	111.0	631	111.7	633	112.0	616	109.0	616	109.0	614	108.7	623	82.0	617	81.2	618	81.3	617	81.2
Elkridge Landing MS	779	779	779	779	718	92.2	754	96.8	762	97.8	787	101.0	798	102.4	841	108.0	867	111.3	878	112.7	868	111.4	899	115.4
Ellicott Mills MS	701	701	701	701	725	103.4	678	96.7	693	98.9	688	98.1	700	99.9	706	100.7	703	100.3	688	98.1	677	96.6	691	98.6
Folly Quarter MS	662	662	662	662	758	114.5	766	115.7	775	117.1	789	119.2	788	119.0	791	119.5	779	117.7	788	119.0	781	118.0	785	118.6
Glenwood MS	545	545	545	545	492	90.3	463	85.0	477	87.5	478	87.7	497	91.2	494	90.6	494	90.6	493	90.5	501	91.9	503	92.3
Hammond MS	604	604	604	604	725	120.0	819	135.6	798	132.1	817	135.3	822	136.1	855	141.6	849	140.6	867	143.5	855	141.6	888	147.0
Harpers Choice MS	506	506	506	506	451	89.1	427	84.4	431	85.2	470	92.9	456	90.1	465	91.9	459	90.7	468	92.5	467	92.3	472	93.3
Lake Elkhorn MS	643	643	643	643	546	84.9	532	82.7	518	80.6	531	82.6	521	81.0	524	81.5	510	79.3	509	79.2	506	78.7	514	79.9
Lime Kiln MS	721	721	721	721	678	94.0	713	98.9	743	103.1	762	105.7	789	109.4	808	112.1	825	114.4	811	112.5	788	109.3	756	104.9
Mayfield Woods MS	798	798	798	798	826	103.5	809	101.4	809	101.4	843	105.6	843	105.6	876	109.8	873	109.4	896	112.3	857	107.4	893	111.9
Mount View MS	798	798	798	798	974	122.1	1010	126.6	997	124.9	988	123.8	1003	125.7	1053	132.0	1039	130.2	1037	129.9	1033	129.4	1034	129.6
Murray Hill MS	662	662	662	662	668	100.9	658	99.4	679	102.6	706	106.6	726	109.7	719	108.6	735	111.0	720	108.8	703	106.2	684	103.3
Oakland Mills MS	A 506	506	506	506	513	101.4	527	104.2	521	103.0	526	104.0	514	101.6	522	103.2	502	99.2	502	99.2	490	96.8	491	96.5
Patapsco MS	643	643	643	643	690	107.3	717	111.5	730	113.5	744	115.7	754	117.3	753	117.1	769	119.6	760	118.2	760	118.2	745	115.9
Patuxent Valley MS	760	760	760	760	814	107.1	821	108.0	799	105.1	792	104.2	805	105.9	848	111.6	887	116.7	896	117.9	903	118.8	914	120.3
Thomas Viaduct MS	701	701	701	701	918	131.0	888	126.7	911	130.0	906	129.2	919	131.1	918	131.0	931	132.8	952	135.8	979	139.7	1035	147.6
Wilke Lake MS	740	740	740	740	669	90.4	677	91.5	708	95.7	765	103.4	769	103.9	794	107.3	793	107.2	821	110.9	820	110.8	835	112.8
<b>Countywide Totals</b>	<b>13457</b>	<b>13457</b>	<b>13457</b>	<b>13457</b>	<b>14064</b>	<b>104.5</b>	<b>14146</b>	<b>105.1</b>	<b>14203</b>	<b>105.5</b>	<b>14491</b>	<b>107.7</b>	<b>14590</b>	<b>108.4</b>	<b>14895</b>	<b>110.7</b>	<b>14903</b>	<b>109.2</b>	<b>14989</b>	<b>109.8</b>	<b>14875</b>	<b>109.0</b>	<b>15029</b>	<b>107.8</b>

'A' includes additions as proposed for FY 2022 CIP for grades 6-8

Color coding has been updated to align with the definition of target utilization (between 90-110% utilization) as outlined in Policy 6010. Blue is under target utilization, green is within target utilization and red is over target utilization.

Pre-Measures

**HIGH SCHOOLS - Data for Demonstrative Purposes Only**

Capacity Utilization Rates with Board of Education's Requested FY 2021 Capital Budget Projects - Not Test for APFO

Chart reflects May 2020 Projections, Board of Education's FY 2021 requested capacities, and boundary adjustments approved by the Board of Education on November 21, 2019 for School Year 2020-21.

Capacity					2020-21		2021-22		2022-23		2023-24		2024-25		2025-26		2026-27		2027-28		2028-29		2029-30		2030-31	
School	2020	2021	2022	2023	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.
Atholton HS	1460	1460	1460	1460	1492	102.2	1515	103.8	1548	106.0	1611	110.3	1651	113.1	1680	115.1	1687	115.5	1706	116.8	1748	119.7	1759	120.5	1777	121.7
Centennial HS	1360	1360	1360	1360	1489	109.5	1432	105.3	1428	105.0	1420	104.4	1443	106.1	1432	105.3	1409	103.6	1401	103.0	1377	101.3	1372	100.9	1375	101.1
Glennelg HS	1420	1420	1420	1420	1308	92.1	1407	99.1	1466	103.2	1506	106.1	1518	106.9	1488	104.8	1493	105.1	1528	107.6	1533	108.0	1561	109.9	1561	109.9
Hammond HS	A	1220	1220	1220	1329	108.9	1342	110.0	1342	110.0	1411	99.4	1490	104.9	1527	107.5	1525	107.4	1538	108.3	1569	110.5	1574	110.8	1615	113.7
Howard HS	1420	1420	1420	1420	1799	126.7	1764	124.2	1704	120.0	1697	119.5	1672	117.7	1661	117.0	1686	118.7	1733	122.0	1746	123.0	1769	124.6	1778	125.2
Long Reach HS	1488	1488	1488	1488	1690	113.6	1781	119.7	1906	128.1	1939	130.3	1976	132.8	1998	134.3	1999	134.3	2038	137.0	2063	138.6	2123	142.7	2156	144.9
Marriotts Ridge HS	1615	1615	1615	1615	1624	100.6	1708	105.8	1799	111.4	1863	115.4	1942	120.2	2008	124.3	2015	124.8	2046	126.7	2014	124.7	2037	126.1	2075	128.5
Mt Hebron HS	1400	1400	1400	1400	1674	119.6	1708	122.0	1699	121.4	1713	122.4	1732	123.7	1774	126.7	1773	126.6	1774	126.7	1806	129.0	1806	129.0	1821	130.1
New HS #13	NS	0	0	1658																						
Oakland Mills HS	1400	1400	1400	1400	1297	92.6	1385	98.9	1500	107.1	1527	109.1	1555	111.1	1571	112.2	1548	110.6	1571	112.2	1566	111.9	1563	111.6	1567	111.9
Reservoir HS	1551	1551	1551	1551	1800	116.1	1886	121.6	1996	128.7	2085	134.4	2128	137.2	2184	140.8	2231	143.8	2236	144.2	2330	150.2	2352	151.6	2377	153.3
River Hill HS	1488	1488	1488	1488	1460	98.1	1441	96.8	1304	87.6	1305	87.7	1274	85.6	1280	86.0	1278	85.9	1296	87.1	1330	89.4	1356	91.1	1373	92.3
Wilde Lake HS	1424	1424	1424	1424	1467	103.0	1458	102.4	1470	103.2	1444	101.4	1339	94.0	1352	94.9	1335	93.8	1379	96.8	1401	98.4	1432	100.6	1452	102.0
<b>Countywide Totals</b>	17246	17246	17246	19104	18429	106.9	18827	109.2	19162	111.1	19521	102.2	19720	103.2	19955	104.5	19979	104.6	20246	106.0	20483	107.2	20704	108.4	20927	109.5

\*A\* includes additions as reflected in FY 2021 CIP for grades 9-12.

\*NS\* New School proposed in FY 2021 Capital Budget

Color coding has been updated to align with the definition of target utilization (between 90-110% utilization) as outlined in Policy 6010. Blue is under target utilization, green is within target utilization and red is over target utilization.



Post-Measures

**HIGH SCHOOLS - Data for Demonstrative Purposes Only****Board Approved SY 2020-21 Boundaries**

Capacity Utilization Rates with Proposed FY 2022 Capital Budget Projects - Not Test for APFO

Chart reflects May 2020 Projections, potential FY 2022 requested capacities and boundary adjustments approved by the Board of Education on November 21, 2019 for School Year 2020-21.

Capacity					2021-22		2022-23		2023-24		2024-25		2025-26		2026-27		2027-28		2028-29		2029-30		2030-31		
School	2021	2022	2023	2024	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	Proj	% Util.	
Atholton HS	1460	1460	1460	1460	1515	103.8	1548	106.0	1611	110.3	1651	113.1	1680	115.1	1687	115.5	1706	116.8	1748	119.7	1759	120.5	1777	121.7	
Centennial HS	1360	1360	1360	1360	1432	105.3	1428	105.0	1420	104.4	1443	106.1	1432	105.3	1409	103.6	1401	103.0	1377	101.3	1372	100.9	1375	101.1	
Glennelg HS	1420	1420	1420	1420	1407	99.1	1466	103.2	1506	106.1	1518	106.9	1488	104.8	1493	105.1	1528	107.6	1533	108.0	1561	109.9	1561	109.9	
Hammond HS	A	1220	1220	1420	1420	1342	110.0	1342	110.0	1411	99.4	1490	104.9	1527	107.5	1525	107.4	1538	108.3	1569	110.5	1574	110.8	1615	113.7
Howard HS	1420	1420	1420	1420	1764	124.2	1704	120.0	1697	119.5	1672	117.7	1661	117.0	1686	118.7	1733	122.0	1746	123.0	1769	124.6	1778	125.2	
Long Reach HS	1488	1488	1488	1488	1781	119.7	1906	128.1	1939	130.3	1976	132.8	1998	134.3	1999	134.3	2038	137.0	2063	138.6	2123	142.7	2156	144.9	
Marriotts Ridge HS	1615	1615	1615	1615	1708	105.8	1799	111.4	1863	115.4	1942	120.2	2008	124.3	2015	124.8	2046	126.7	2014	124.7	2037	126.1	2075	128.5	
Mt Hebron HS	1400	1400	1400	1400	1708	122.0	1699	121.4	1713	122.4	1732	123.7	1774	126.7	1773	126.6	1774	126.7	1806	129.0	1806	129.0	1821	130.1	
New HS #13	NS	0	0	1658	1658																				
Oakland Mills HS	1400	1400	1400	1400	1385	98.9	1500	107.1	1527	109.1	1555	111.1	1571	112.2	1548	110.6	1571	112.2	1566	111.9	1563	111.6	1567	111.9	
Reservoir HS	1551	1551	1551	1551	1886	121.6	1996	128.7	2085	134.4	2128	137.2	2184	140.8	2231	143.8	2236	144.2	2330	150.2	2352	151.6	2377	153.3	
River Hill HS	1488	1488	1488	1488	1441	96.8	1304	87.6	1305	87.7	1274	85.6	1280	86.0	1278	85.9	1296	87.1	1330	89.4	1356	91.1	1373	92.3	
Wilde Lake HS	1424	1424	1424	1424	1458	102.4	1470	103.2	1444	101.4	1339	94.0	1352	94.9	1335	93.8	1379	96.8	1401	98.4	1432	100.6	1452	102.0	
Countywide Totals	17246	17246	19104	19104	18827	109.2	19162	111.1	19521	102.2	19720	103.2	19955	104.5	19979	104.6	20246	106.0	20483	107.2	20704	108.4	20927	109.5	

'NS' New School proposed for FY 2022 Capital Budget

'A' includes additions as proposed for FY 2022 CIP for grades 9-12

Color coding has been updated to align with the definition of target utilization (between 90-110% utilization) as outlined in Policy 6010. Blue is under target utilization, green is within target utilization and red is over target utilization.

# **PUBLIC SCHOOL ENROLLMENT** **ACTUAL FOR 1973-2019 AND ESTIMATED FOR 2020-2031**

	Year	Elementary	K-5	Middle	6-8	High	9-12	Sp. Ed. School	Sp Ed.	K-12	
		Enrollment	Change	Enrollment	Change	Enrollment	Change	Enrollment	Change	Enrollment	Change
A C T U A L  E N R O L L M E N T S	1973	10,481	-	5,289	-	6,177	-	30	-	21,977	-
	1974	10,798	317	5,652	363	6,638	461	35	5	23,123	1,146
	1975	10,891	93	6,025	373	7,032	394	44	9	23,992	869
	1976	11,069	178	6,117	92	7,410	378	61	17	24,657	665
	1977	11,246	177	6,175	58	7,957	547	62	1	25,440	783
	1978	10,968	-278	6,080	-95	8,488	531	70	8	25,606	166
	1979	10,627	-341	6,163	83	8,530	42	80	10	25,400	-206
	1980	10,261	-366	6,337	174	8,547	17	83	3	25,228	-172
	1981	9,856	-405	6,409	72	8,468	-79	112	29	24,845	-383
	1982	9,486	-370	6,245	-164	8,387	-81	106	-6	24,224	-621
	1983	9,414	-72	5,988	-257	8,458	71	103	-3	23,963	-261
	1984	9,808	394	5,597	-391	8,723	265	124	21	24,252	289
	1985	10,439	631	5,496	-101	8,900	177	143	19	24,978	726
	1986	11,135	696	5,551	55	8,737	-163	173	30	25,596	618
	1987	12,155	1,020	5,727	176	8,675	-62	191	18	26,748	1,152
	1988	13,225	1,070	5,776	49	8,441	-234	147	-44	27,589	841
	1989	14,160	935	6,235	459	8,305	-136	136	-11	28,836	1,247
	1990	15,001	841	6,603	368	8,248	-57	150	14	30,002	1,166
	1991	15,805	804	7,058	455	8,527	279	70	-80	31,460	1,458
	1992	16,456	651	7,382	324	8,858	331	60	-10	32,756	1,296
	1993	17,155	699	7,958	576	9,107	249	58	-2	34,278	1,522
	1994	17,767	612	8,510	552	9,611	504	62	4	35,950	1,672
	1995	18,226	459	8,843	333	10,181	570	73	11	37,323	1,373
	1996	18,795	569	9,066	223	10,713	532	82	9	38,656	1,333
	1997	19,241	446	9,293	227	11,387	674	89	7	40,010	1,354
	1998	19,849	608	9,669	376	12,020	633	95	6	41,633	1,623
	1999	20,395	546	10,177	508	12,481	461	103	8	43,156	1,523
	2000	20,821	426	10,672	495	12,927	446	105	2	44,525	1,369
	2001	21,000	179	11,138	466	13,479	552	115	10	45,732	1,207
	2002	21,012	12	11,446	308	14,080	601	112	-3	46,650	918
	2003	20,792	-220	11,689	243	14,629	549	101	-11	47,211	561
	2004	20,498	-294	11,754	65	15,235	606	95	-6	47,582	371
	2005	20,412	-86	11,716	-38	15,580	345	87	-8	47,795	213
	2006	20,318	-94	11,889	173	15,858	278	90	3	48,155	360
	2007	20,550	232	11,740	-149	16,094	236	96	6	48,480	325
	2008	20,811	261	11,748	8	16,231	137	98	2	48,888	408
	2009	21,292	481	11,649	-99	16,657	426	85	-13	49,683	795
	2010	21,814	522	11,472	-177	16,614	-43	91	6	49,991	308
	2011	22,246	432	11,523	51	16,627	13	93	2	50,489	498
	2012	22,735	489	11,483	-40	16,660	33	91	-2	50,969	480
	2013	23,327	592	11,890	407	16,378	-282	86	-5	51,681	712
	2014	23,698	371	12,276	386	16,438	60	99	13	52,511	830
	2015	24,245	547	12,715	439	16,574	136	100	1	53,634	1,123
	2016	24,582	337	12,897	182	16,768	194	101	1	54,348	714
	2017	24,978	733	13,180	465	17,233	659	99	-1	55,490	1,856
	2018	25,320	342	13,427	247	17,724	491	99	0	56,570	1,080
	2019	25,459	139	13,815	388	18,132	408	112	13	57,518	948
P R O J E C T I O N S	2020	25,705	246	14,008	193	18,429	297	115	3	58,257	739
	2021	26,004	299	14,064	56	18,827	398	115	0	59,010	753
	2022	26,186	182	14,146	82	19,162	335	115	0	59,609	599
	2023	26,399	213	14,203	57	19,521	359	115	0	60,238	629
	2024	26,592	193	14,491	288	19,720	199	115	0	60,918	680
	2025	26,922	330	14,590	99	19,955	235	115	0	61,582	664
	2026	27,191	269	14,895	305	19,979	24	115	0	62,180	598
	2027	27,504	313	14,903	8	20,246	267	115	0	62,768	588
	2028	27,847	343	14,989	86	20,483	237	115	0	63,434	666
	2029	28,188	341	14,875	-114	20,704	221	115	0	63,882	448
	2030	28,380	876	15,029	126	20,927	681	115	0	64,451	569
	2031	28,436	589	15,291	302	20,945	462	115	0	64,787	336

Notes: (1) All "actual" enrollments are head count as of September 30th.

(2) "Change" column indicates change from prior year.

(3) Preschool enrollments are not included in these figures.

(4) Cedar Lane School's projected enrollment is based on Cedar Lane School's September 30, 2020 estimation

## Facility Use, Acreage, and Capital Projects

HCPSS Elementary Schools	Acreage	Current Relocatables	Original Construction Cost	Initially Complete	Renovations (R), Additions (A), Conversion (C), Projects
Atholton ES	12.31	3	\$ 447,569	1961	1980(A), 2001(R), 2002(R), 2006, 2007
Bellows Spring ES	40.00	5	\$ 15,105,663	2003	2009(A), 2011(A)
Bollman Bridge ES	16.95	2	\$ 6,274,000	1988	1994(A), 2008(C), 2013(R/A)
Bryant Woods ES	9.25	6	\$ 695,406	1968	1983, 1984(A), 2004(R), 2007
Bushy Park ES	19.20	0	\$ 24,000,000	2007	(Replacement) replaced Old Bushy Park with a new school
Centennial Lane ES	11.22	6	\$ 1,101,140	1973	1987(A), 2007(R), 2008(A)
Clarksville ES	10.69	1	\$ 435,986	1964	1980(A), 1986 HVAC, 2002(R), 2006
Clemens Crossing ES	10.80	3	\$ 1,853,590	1979	1988(A), 2009(R)
Cradlerock ES	33.16	6	\$ 4,249,000	1976	1998(A), 2001(R), 2003(R), 2007, 1996 Dasher Green Head Start
Dayton Oaks ES*	22.74	0	\$ 21,804,000	2006	New school 2006
Deep Run ES	11.67	1	\$ 6,403,575	1990	1998(A), 2009(A), 2016 (R)
Ducketts Lane ES	10.03	0	\$ 34,447,000	2013	New school 2013
Elkridge ES	48.581 shared	4	\$ 7,139,588	1992	1998, 2009(A)
Forest Ridge ES**	20.85	5	\$ 6,050,000	1992	2001/2 (R)/(A), 2009(A)
Fulton ES**	99.0 shared	10	\$ 6,156,161	1997	2003(A)/(R), 2006
Gorman Crossing ES**	15.00	3	\$ 5,766,716	1998	2007, 2013(A)
Guilford ES	11.00	5	\$ 216,278	1954	1959(R), 1982, 1986(A), 1989, 2006
Hammond ES	35.00 shared	2	\$ 2,381,673	1971	(includes Hammond MS & Hammond ES) 1987, 1988/9, 1996/7 (A), 2007, 2011(R/A)
Hanover Hills ES	8.02	0	\$ 43,873,000	2018	New School 2018
Hollifield Station ES	14.50	6	\$ 6,017,889	1997	2002(R)/(A), 2009(A)
Ilchester ES**	27.22 shared	3	\$ 6,430,404	1996	2000/1, 2008(A)
Jeffers Hill ES	10.00	2	\$ 1,747,200	1975	1998/1999(R)
Laurel Woods ES	27.00	1	\$ 1,658,399	1973	1987(A), 2004(R), 2005(ROOFING PROJECT), 2008(A)
Lisbon ES	22.55	1	\$ 2,056,000	1976	1988(A), 2006
Longfellow ES	9.50	0	\$ 775,481	1970	1986(R), 1994(A), 2008(A), 2015 (R)
Manor Woods ES	43.23	5	\$ 5,900,000	1994	2004(R)
Northfield ES	10.00	1	\$ 20,330,000	1968	1986(A), 2007, 2011(R/A)
Phelps Luck ES	10.00	4	\$ 1,036,792	1972	1989, 1999(A), 2007, 2013(R/A)
Pointers Run ES	13.69	9	\$ 6,645,000	1991	2000, 2001/2, 2006, 2008(A)
Rockburn ES	8.74	1	\$ 5,849,000	1993	2004(A), 2007
Running Brook ES	9.00	2	\$ 776,406	1970	1984(A)/(REMODELING), 2004 (ROOF REPLACEMENT), 2006, 2014(A)
St. John's Lane ES	10.00	7	\$ 235,985	1954	1988(A), 1959, 1966, 1975(MODERNIZ) 1988, 1995, 2000(A)/(R), 2009(A)
Stevens Forest ES	10.00	5	\$ 764,941	1972	1995(A), 2013(R/A)
Swansfield ES	10.00	0	\$ 764,941	1972	1988(A), 1998(R), 2008(A)
Talbot Springs ES	10.00	10	\$ 1,224,800	1973	1999(SPRINKLERS), 2000(A) & (R), 2008(A)
Thunder Hill ES	14.93	3	\$ 14,515,430	1970	1987, 1988(A), 1988, 1989, 2007, 2012(R/A)
Triadelphia Ridge ES	78.3 shared	0	\$ 6,219,488	1998	2005(A), 2006
Veterans ES**	23.66	5	\$ 19,000,000	2007	New school 2007
Waterloo ES	10.00	4	\$ 435,221	1964	1987(A)/( MODERNIZATION), 1998(A), 2009(R)
Waverly ES	11.49	5	\$ 6,669,587	1990	2007, 2018 (R)
West Friendship ES	17.85	0	unknown	1925	(7 rm school (1925)) 1950, 1962, 1971(MODERNIZATION), 1978(A), 2004(R), 2005(ROOF)
Worthington ES	19.69	1	\$ 2,385,850	1976	1989, 1998, 2007, 2008(R)

\*Dayton Oaks shares 12.66 acres with Recreation and Parks play fields.

\*\* At least one of the current relocatables is used for Recreation and Parks programming: Forest Ridge (1), Fulton (1), Gorman Crossing (1), Veterans (1).



## Facility Use, Acreage, and Capital Projects

HCPSS Middle Schools	Acreage	Current Relocatables	Original Construction Cost	Initially Complete	Renovations (R), Additions (A), Conversion (C), Projects
Bonnie Branch MS*	27.22 shared	2	\$ 7,819,520	1999	1999(A)
Burleigh Manor MS	27.00	2	\$ 8,107,000	1992	
Clarksville MS	20.43	5	\$ 5,662,361	1979	2004, 2006(A), 2008(R), 2010(Masonry)
Dunloggin MS	20.00	5	\$ 1,963,323	1973	1999(R)
Elkridge Landing MS	48.58	0	\$ 9,000,000	1995	
Ellicott Mills MS	16.22	7	\$ 9,430,537	2001	Original 1939 replaced in 2001
Folly Quarter MS	78.3 shared	0	\$ 11,077,000	2003	
Glenwood MS	30.00	0	\$ 1,179,168	1967	1999(R), 2000(R), 1986(Air Conditioning), 2016 (HVAC)
Hammond ES/MS	35.00 shared	3	\$ 22,650,672	1971	includes Hammond MS & Hammond ES, 2011
Harper's Choice MS	19.67	5	\$ 1,974,697	1973	1999(R), 2000
Lake Elkhorn MS	33.16 shared	1	\$ 4,244,500	1976	includes Dasher Green ES & Owen Brown MS
Lime Kiln MS	99.0 shared	0	\$ 8,420,400	1999	2005(A)
Mayfield Woods MS	27.00	2	\$ 8,501,354	1991	
Mount View MS	35.75	2	\$ 8,617,000	1993	
Murray Hill MS	25.00	6	\$ 7,858,000	1997	
Oakland Mills MS	20.00	0	\$ 1,803,876	1972	1998 (R)
Patapsco MS	21.13	4	\$ 1,391,791	1969	1974, 1996, 2003(R)/(A), 2004 (R)/(A)
Patuxent Valley MS	30.00	0	\$ 8,261,000	1989	2017 (R)
Thomas Viaduct MS	20.21	2	\$ 34,755,000	2014	
Wilde Lake MS	21.00	0	\$ 1,323,314	2017	1969 original replaced in 2017

HCPSS High Schools	Acreage	Current Relocatables	Original Construction Cost	Initially Complete	Renovations (R), Additions (A), Projects
Atholton HS	36.28	0	\$ 1,423,493	1966	1972, 1977, 1978, 1988, 1987(A), 1997(R), 2003(R)/(A),
Centennial HS	43.00	9	\$ 6,337,867	1977	1998(R), 2002(R)/(A), 2011(A)
Glenelg HS	40.94	0	\$ 56,345,257	1958	1963, 1967, 1969, 1971, 1972(R), 1986(A), 1988(A)/(R), 2003, 2008(A), 2009(Auditorium), 2011(HVA
Hammond HS	33.14	4	\$ 6,321,000	1976	1996(A), 1998@, 2011(A)
Howard HS	41.00	15	\$ 698,781	1951	1960, 1964, 1971, 1975, 1977, 2001(A)/(R), 2002(R), 2004, 2006, 2009(Windows)
Long Reach HS	50.00	7	\$ 20,373,000	1996	
Marriotts Ridge HS	42.40	0	\$ 34,115,895	2005	
Mt. Hebron HS	40.05	5	\$ 55,560,000	1965	1968, 1972, 1976, 1977-1978, 1983(MODERNIZATION), 1997-99(A), 2004(R), 2005(R), 2011
Oakland Mills HS	28.60	0	\$ 3,579,000	1973	1991-92(R), 1998(R), 2004(A)
Reservoir HS	99.0 shared	5	\$ 27,224,000	2002	
River Hill HS	64.2	0	\$ 21,473,000	1994	
Wilde Lake HS	31.25	0	\$ 21,202,391	1996	(Replacement)

HCPSS Countywide Schools	Acreage	Current Relocatables	Original Construction Cost	Initially Complete	Renovations (R), Additions (A), Projects
Applications & Research Lab	45.48 shared	0	\$ 1,502,581	1968	1970, 1974, 1986, 1997/1998(R), 2002(NEW ROOF), 2006
Cedar Lane Special	99.0 shared	0	\$ 18,663,069	2005	2005(A)
Homewood	45.48 shared	1	\$ 8,620,912	2002	

HCPSS Other Facilities	Acreage	Current Relocatables	Original Construction Cost	Initially Complete	Renovations (R), Additions (A), Projects
Admin. Building(Central Office)	45.48 shared	4	\$ 3,657,660	1980	
Old Bushy Park	12.00 shared	0	\$ 2,931,991	1976	1988(A), school replaced 2007
Faulkner Ridge Resource Center	9.01	0	\$ 750,174	1969	
Old Cedar Lane	11	0	\$ 3,839,731	1981	

\* One of the current relocatables is used for Recreation and Parks programming at Bonnie Branch.

## ELEMENTARY SCHOOLS - JUNE 2020 APFO School Capacity Chart

Capacity Utilization Rates with Board of Education's Requested FY 2021 Capital Budget Projects

Chart reflects May 2019 Projections with the impact of the Board's approved FY 2021-22 boundaries and the Board of Education's Requested FY 2021 capacities.

	Capacity				2023-24		2024-25		2025-26		2026-27		2027-28		2028-29		2029-30		2030-31		2031-32		2032-33	
	2023	2024	2025	2026	Pro	% Util	Pro	% Util	Pro	% Util	Pro	% Util	Pro	% Util	Pro	% Util	Pro	% Util	Pro	% Util	Pro	% Util	Pro	% Util
<b>Columbia - East</b>																								
Croderock ES	398	398	398	398	454	114.3	C	454	114.3	C	454	114.3	C	453	113.8	C	453	113.8	C	454	114.3	C	453	113.8
Jeffers Hill ES	421	421	421	421	373	88.6		367	87.2		368	87.4		377	89.5		384	91.2		393	93.3		408	96.9
Phelps Luck ES	597	597	597	597	658	110.2	C	656	109.9	C	668	111.9	C	669	112.1	C	674	112.9	C	705	118.1	C	716	119.9
Stevens Forest ES	380	380	380	380	352	92.4		347	91.3		348	91.6		352	92.6		354	93.2		355	93.4		352	92.6
Talbot Springs ES	540	540	540	540	394	73.0		398	73.7		410	75.9		413	76.5		443	82.0		463	85.7		473	87.6
Thunder Hill ES	509	509	509	509	534	104.9		533	104.7		535	105.1	C	535	105.1	C	554	110.8	C	575	113.0	C	580	113.9
<b>Region Totals</b>	<b>2845</b>	<b>2845</b>	<b>2845</b>	<b>2845</b>	<b>2765</b>	<b>97.2</b>		<b>2755</b>	<b>96.8</b>		<b>2762</b>	<b>97.8</b>		<b>2797</b>	<b>98.3</b>		<b>2844</b>	<b>100.0</b>		<b>2912</b>	<b>102.4</b>		<b>2947</b>	<b>104.3</b>
<b>Columbia - West</b>																								
Bryant Woods ES	361	361	361	361	446	123.5	C	458	126.9	C	470	130.2	C	487	134.9	C	495	137.1	C	510	141.3	C	524	145.2
Clemens Crossing ES	521	521	521	521	632	121.3	C	644	123.6	C	659	126.5	C	680	130.5	C	692	132.8	C	714	137.0	C	735	141.1
Longfellow ES	512	512	512	512	506	98.8		507	99.0		522	102.0		531	103.7		541	105.7		554	108.2		564	110.2
Running Brook ES	515	515	515	515	551	107.0	C	589	114.4	C	609	118.3	C	638	123.9	C	665	129.1	C	703	136.5	C	715	138.8
Swanfield ES	694	694	694	694	671	96.7		673	97.0		677	97.6		676	97.4		679	97.8		682	98.3		681	98.1
<b>Region Totals</b>	<b>2603</b>	<b>2603</b>	<b>2603</b>	<b>2603</b>	<b>2806</b>	<b>107.8</b>	C	<b>2871</b>	<b>110.3</b>	C	<b>2957</b>	<b>112.8</b>	C	<b>3012</b>	<b>115.7</b>	C	<b>3072</b>	<b>118.0</b>	C	<b>3163</b>	<b>121.5</b>	C	<b>3219</b>	<b>123.7</b>
<b>Northeastern</b>																								
Bellevue Spring ES	726	726	726	726	709	97.7		733	101.0		751	103.4		747	102.9		744	102.5		747	102.9		744	102.5
Deep Run ES	750	750	750	750	752	100.3		786	104.8		806	107.5		820	109.3		848	112.4		866	115.5		892	118.9
Ducketts Lane ES	650	650	650	650	690	106.2	C	688	106.8	C	692	106.5	C	704	108.3	C	707	108.8	C	721	110.9	C	730	112.3
Elkridge ES	740	740	740	740	819	107.8	C	838	113.3	C	875	115.1	C	896	117.9	C	944	126.8	C	1004	132.1	C	1021	134.3
Hammer Hills ES	810	810	810	810	706	87.2		697	86.0		694	85.7		729	90.0		752	92.8		747	92.2		737	91.0
Ichster ES	584	584	584	584	585	100.2		604	103.4		665	113.9	C	680	116.4	C	704	120.5	C	735	125.9	C	759	130.0
Rockburn ES	584	584	584	584	627	107.4	C	638	109.2	C	654	112.0	C	676	115.8	C	678	116.1	C	673	115.2	C	663	113.5
Veterans ES	799	799	799	799	851	106.5	C	860	107.6	C	860	107.6	C	897	112.3	C	932	116.6	C	936	117.1	C	938	117.4
Waterloo ES	603	603	603	603	574	95.2		580	96.2		593	98.3		600	99.5		604	100.2		615	102.0		620	102.8
Warrington ES	515	515	515	515	469	91.1		492	95.5		515	100.0		531	103.1		607	117.9	C	640	126.2	C	661	128.3
<b>Region Totals</b>	<b>6781</b>	<b>6781</b>	<b>6781</b>	<b>6781</b>	<b>6782</b>	<b>100.0</b>		<b>6916</b>	<b>102.0</b>		<b>7308</b>	<b>104.8</b>		<b>7245</b>	<b>106.8</b>	C	<b>7511</b>	<b>110.8</b>	C	<b>7714</b>	<b>113.8</b>	C	<b>7785</b>	<b>114.8</b>
<b>Northern</b>																								
Centennial Lane ES	647	647	647	647	727	112.4	C	741	114.5	C	757	117.0	C	768	118.7	C	788	121.8	C	788	121.8	C	801	123.8
Halfway Station ES	732	732	732	732	753	102.9		761	104.0		760	103.8		754	103.0		749	102.3		747	102.0		745	101.8
Marion Woods ES	681	681	681	681	765	112.3	C	735	107.9	C	743	109.1	C	766	112.5	C	763	112.0	C	768	112.8	C	774	113.7
Northfield ES	700	700	700	700	840	120.0	C	858	122.6	C	874	124.9	C	906	129.4	C	930	132.9	C	965	137.9	C	982	140.3
St John's Lane ES	612	612	612	612	686	112.1	C	704	115.0	C	704	115.0	C	697	113.9	C	691	112.9	C	685	111.9	C	676	110.5
Waverly ES	788	788	788	788	854	108.4	C	873	110.8	C	867	110.0	C	854	108.4	C	843	109.5	C	864	109.6	C	857	108.8
<b>Region Totals</b>	<b>4140</b>	<b>4140</b>	<b>4140</b>	<b>4140</b>	<b>4425</b>	<b>111.2</b>	C	<b>4472</b>	<b>112.3</b>	C	<b>4705</b>	<b>113.1</b>	C	<b>4745</b>	<b>114.1</b>	C	<b>4784</b>	<b>115.0</b>	C	<b>4817</b>	<b>115.8</b>	C	<b>4835</b>	<b>116.2</b>
<b>Southeastern</b>																								
Atholton ES	424	424	424	424	442	104.2		444	104.7		443	104.5		442	104.2		441	104.0		441	104.0		442	104.2
Bolton Bridge ES	666	666	666	666	754	113.2	C	765	114.9	C	760	114.1	C	747	112.2	C	739	111.0	C	737	110.7	C	722	108.4
Forest Ridge ES	713	713	713	713	713	100.0		740	103.8		796	111.6	C	844	118.4	C	883	123.8	C	919	128.9	C	942	132.1
Gorman Crossing ES	735	735	735	735	869	118.2	C	861	117.1	C	852	115.9	C	843	117.4	C	871	118.5	C	865	117.7	C	850	115.4
Gulford ES	465	465	465	465	461	99.1		474	101.9		508	109.2	C	515	110.8	C	528	113.5	C	537	115.5	C	543	116.8
Hammond ES	653	653	653	653	756	115.8	C	793	121.4	C	842	128.9	C	862	132.0	C	903	138.3	C	926	141.8	C	943	144.4
Laurel Woods ES	609	609	609	609	546	89.7		550	90.3		546	89.7		555	91.1		554	91.0		555	91.1		556	91.3
<b>Region Totals</b>	<b>4265</b>	<b>4265</b>	<b>4265</b>	<b>4265</b>	<b>4541</b>	<b>106.5</b>	C	<b>4627</b>	<b>108.5</b>	C	<b>4748</b>	<b>111.3</b>	C	<b>4829</b>	<b>113.2</b>	C	<b>4920</b>	<b>115.4</b>	C	<b>4980</b>	<b>116.8</b>	C	<b>4997</b>	<b>117.2</b>
<b>Western</b>																								
Beth Park ES	725	725	725	725	544	75.0		530	73.1		521	71.9		536	73.9		534	73.7		567	78.2		589	81.2
Clarksville ES	543	543	543	543	546	100.6		547	100.7		566	104.2		569	104.8		570	105.0		597	109.9		600	110.5
Dayton Oaks ES	700	700	700	700	752	107.4	C	789	112.7	C	807	115.3	C	818	116.9	C	815	116.4	C	837	119.6	C	854	122.0
Fulton ES	826	826	826	826	864	104.6		863	104.5		843	102.1		830	100.5		807	97.7		819	99.2		809	97.9
Union ES	527	527	527	527	519	98.5		523	99.2		517	98.1		533	101.1		542	104.6		590	112.0		594	112.7
Pointers Run ES	744	744	744	744	821	110.3	C	823	110.6	C	820	110.2	C	805	108.2	C	784	105.4	C	756	101.6	C	731	98.3
Triadelphia Ridge ES	606	606	606	606	555	91.6		553	91.3		567	93.6		566	93.4		563	92.9		559	92.2		543	89.6
West Friendship ES	414	414	414	414	486	117.4	C	531	128.3	C	560	135.3	C	570	137.7	C	580	140.1	C	600	144.9	C	612	147.8
<b>Region Totals</b>	<b>5085</b>	<b>5085</b>	<b>5085</b>	<b>5085</b>	<b>5087</b>	<b>100.0</b>		<b>5159</b>	<b>101.5</b>		<b>5201</b>	<b>102.3</b>		<b>5227</b>	<b>102.8</b>		<b>5215</b>	<b>102.4</b>		<b>5325</b>	<b>104.7</b>		<b>5332</b>	<b>104.9</b>
<b>Countywide Totals</b>	<b>25739</b>	<b>25739</b>	<b>25739</b>	<b>25739</b>	<b>26606</b>	<b>103.4</b>		<b>27000</b>	<b>104.9</b>		<b>27481</b>	<b>106.8</b>		<b>27855</b>	<b>108.2</b>		<b>28346</b>	<b>110.1</b>		<b>28911</b>	<b>112.3</b>		<b>29135</b>	<b>113.2</b>

R: Replacement school scheduled to open in August 2022 as reflected in FY 2021 CIP.

C: Constrained for future residential development.

### MIDDLE SCHOOLS - MAY 2020 APFO School Capacity Chart

Capacity Utilization Rates with Board of Education's Requested FY 2021 Capital Budget Projects

Chart reflects May 2019 Projections with the impact of the Board's approved SY 2021-22 boundaries and the Board of Education's Requested FY 2021 capacities.

Capacity				2023-24		2024-25		2025-26		2026-27		2027-28		2028-29		2029-30		2030-31		2031-32		2032-33											
	2023	2024	2025	Proj	% UHL	Proj	% UHL	Proj	% UHL	Proj	% UHL	Proj	% UHL	Proj	% UHL	Proj	% UHL	Proj	% UHL	Proj	% UHL	Proj	% UHL										
Bonnie Branch MS	701	701	701	718	102.4	759	108.3	771	110.0	C	805	114.8	C	775	110.6	C	787	112.3	C	780	111.3	C	812	115.8	C	842	120.1	C	877	125.1	C		
Burleigh Manor MS	779	779	779	818	105.0	823	105.6	830	106.5		835	107.2		821	105.4		814	104.5		811	104.1		822	105.5		836	107.3		858	110.1	C		
Clarksville MS	643	643	643	674	104.8	701	109.0	705	109.6		714	111.0	C	715	111.2	C	721	112.1	C	723	112.4	C	722	112.3	C	727	113.1	C	713	110.9	C		
Dunlaggin MS	A	565	565	666	117.9	C	670	118.6	C	667	118.1	C	683	120.9	C	686	121.4	C	674	101.8		670	101.2		684	103.3		716	108.2		741	111.9	C
Elkridge Landing MS	779	779	779	801	102.8	810	104.0	804	103.2		826	106.0		836	107.3		848	108.9		851	109.2		885	113.6	C	914	117.3	C	929	119.3	C		
Ellicott Mills MS	701	701	701	761	108.6	748	106.7	739	105.4		735	104.9		736	105.0		740	105.6		739	105.4		792	113.0	C	837	119.4	C	869	124.0	C		
Folly Quarter MS	662	662	662	681	102.9	674	101.8	697	105.3		712	107.6		736	111.2	C	730	110.3	C	742	112.1	C	751	113.4	C	764	115.4	C	765	115.6	C		
Glenwood MS	545	545	545	502	92.1	499	91.6	521	95.6		539	98.9		553	101.5		549	100.7		553	101.5		557	102.2		577	105.9		575	105.5			
Hammond MS	604	604	604	713	118.0	C	743	123.0	C	754	124.8	C	780	129.1	C	790	130.8	C	810	134.1	C	818	135.4	C	846	140.1	C	858	142.1	C	865	143.2	C
Harpers Choice MS	506	506	506	482	95.3	498	98.4	509	100.6		526	104.0		521	103.0		523	103.4		514	101.6		524	103.6		543	107.3		563	111.3	C		
Lake Elkhorn MS	643	643	643	530	82.4	544	84.6	523	81.3		530	82.4		519	80.7		517	80.4		512	79.6		521	81.0		531	82.6		544	84.6			
Lime Kiln MS	721	721	721	737	102.2	743	103.1	751	104.2		774	107.4		817	113.3	C	803	111.4	C	825	114.4	C	809	112.2	C	826	114.6	C	798	110.7	C		
Mayfield Woods MS	798	798	798	815	102.1	843	105.6	861	107.9		906	113.8	C	928	116.3	C	929	116.4	C	916	114.8	C	939	117.7	C	976	122.3	C	1001	125.4	C		
Mount View MS	798	798	798	911	114.2	C	940	117.8	C	944	118.3	C	968	121.3	C	972	121.8	C	968	121.3	C	970	121.6	C	971	121.7	C	989	123.9	C	1001	125.4	C
Murray Hill MS	662	662	662	722	109.1	754	113.9	C	763	115.3	C	736	111.2	C	742	112.1	C	738	111.5	C	748	113.0	C	748	113.0	C	743	112.2	C	733	110.7	C	
Oakland Mills MS	A	506	506	547	108.1	544	107.5	536	105.9		537	106.1		519	102.6		520	102.8		514	101.6		533	80.5		542	81.9		554	83.7			
Patapsco MS	643	643	643	779	121.2	C	781	121.5	C	782	121.6	C	788	122.6	C	788	122.6	C	785	122.1	C	777	120.8	C	774	120.4	C	761	118.4	C	753	117.1	C
Patuxent Valley MS	760	760	760	783	103.0	794	104.5	789	103.8		828	108.9		836	110.0		836	110.0		851	112.0	C	879	115.7	C	910	119.7	C	920	121.1	C		
Thomas Viaduct MS	701	701	701	837	119.4	C	830	118.4	C	833	118.8	C	825	117.7	C	839	119.7	C	862	123.0	C	868	126.7	C	899	128.2	C	897	128.0	C	875	124.8	C
Wild Lake MS	721	721	721	705	97.8	731	101.4	767	106.4		796	110.4	C	837	116.1	C	836	116.0	C	872	120.9	C	896	124.3	C	948	131.5	C	974	135.1	C		
Countywide Totals	13438	13438	13438	14182	105.5	14429	107.4	14546	108.2		14845	110.5		14966	111.4		14990	110.7		15074	111.4		15364	112.2		15737	114.9		15908	116.2			

\*A\* Includes additions as reflected in FY 2021 CIP for Grades 6-8

C: Constrained for future residential development.



## HIGH SCHOOLS - MAY 2020 APFO School Capacity Chart

## Capacity Utilization Rates with Board of Education's Requested FY 2021 Capital Budget Projects

Chart reflects May 2019 Projections with the impact of the Board's approved SY 2021-22 boundaries and the Board of Education's Requested FY 2021 capacities.

Chancellor's July 2019 Report: Impacts with the impact of the 2023-24, 2024-25, 2025-26, 2026-27, 2027-28, 2028-29, 2029-30, 2030-31, 2031-32, 2032-33																															
		Capacity			2023-24		2024-25		2025-26		2026-27		2027-28		2028-29		2029-30		2030-31		2031-32		2032-33								
		2023	2024	2025	Proj	% Util	Proj	% Util	Proj	% Util	Proj	% Util	Proj	% Util	Proj	% Util	Proj	% Util	Proj	% Util	Proj	% Util	Proj	% Util							
Atholton HS		1460	1460	1460	1569	107.5	1573	107.7	1594	109.2	1599	109.5	1611	110.3	1651	113.1	1674	114.7	1697	116.2	C	1708	117.0	C	1733	118.7	C				
Centennial HS		1360	1360	1360	1571	115.5	C	1586	116.6	C	1590	116.9	C	1573	115.7	C	1578	116.0	C	1572	115.6	C	1570	115.4	C	1559	114.6	1548	113.8		
Glenn HS		1420	1420	1420	1438	101.3	1443	101.6	1416	99.7	1401	98.7	1410	99.3	1428	100.6	1474	103.8	1495	105.3	1498	105.5	1507	106.1	1507	106.1	1507	106.1			
Hammond HS	A	1420	1420	1420	1417	99.8	1457	102.6	1485	104.6	1466	103.2	1477	104.0	1496	105.4	1507	106.1	1545	108.8	1590	109.2	1587	111.8	1587	111.8	1587	111.8			
Howard HS		1420	1420	1420	1720	121.1	C	1721	121.2	C	1739	122.5	C	1749	123.2	C	1800	126.8	C	1813	127.7	C	1827	128.7	C	1833	129.1	C	1837	129.4	C
Long Reach HS		1488	1488	1488	1873	125.9	C	1918	128.9	C	1950	131.0	C	1963	131.9	C	1991	133.8	C	2021	135.8	C	2073	139.3	C	2106	141.5	C	2118	142.3	C
Mariotts Ridge HS		1615	1615	1615	1858	115.0	C	1896	117.4	C	1939	120.1	C	1915	118.6	C	1942	120.2	C	1929	119.4	C	1919	118.8	C	1957	121.2	C	1936	119.9	C
MIT Hebron HS		1400	1400	1400	1597	114.1	1647	117.6	C	1710	122.1	C	1725	123.2	C	1751	125.1	C	1759	125.6	C	1759	125.6	C	1758	125.6	C	1751	125.1	C	
New HS #13	NS	1658	1658	1658																											
Oakland Mills HS		1400	1400	1400	1495	106.8	1490	106.4	1478	105.6	1475	105.4	1490	106.4	1493	106.6	1499	107.1	1487	106.2	1468	104.9	1468	104.9	1468	104.9	1468	104.9	1468	104.9	
Reservoir HS		1551	1551	1551	1990	128.3	C	2015	129.9	C	2064	133.1	C	2104	135.7	C	2093	134.9	C	2159	139.2	C	2179	140.5	C	2199	141.8	C	2214	142.7	C
River Hill HS		1488	1488	1488	1534	103.1	1492	100.3	1475	99.1	1464	98.4	1469	98.7	1493	100.3	1517	101.9	1554	104.4	1556	104.6	1581	106.3	1581	106.3	1581	106.3	1581	106.3	
Wide Lake HS		1424	1424	1424	1370	96.2	1347	94.6	1348	94.7	1346	94.5	1356	95.2	1391	97.7	1437	100.9	1478	103.8	1473	103.4	1495	105.0	1495	105.0	1495	105.0	1495	105.0	
Countywide Totals		19104	19104	19104	19432	101.7	19585	102.5	19788	103.6	19783	103.6	19963	104.5	20211	105.8	20437	107.0	20679	108.2	20643	108.1	20844	109.1	20844	109.1	20844	109.1	20844	109.1	

\*A\* Includes additions as reflected in FY 2021 CP for Grades 9-12

\*NS\* Includes new school as reflected in FY 2021 OIP for Grades 9-12

C: Constrained for future residential development.

Facilities Constructed With Assistance From Maryland School Construction Funds (1980–2020)				
Completion (School year)	Elementary	Middle	High	Special
1980–1981				
1981–1982				Cedar Lane
1988–1989	Bollman Bridge			
1989–1990		Patuxent Valley		
1990–1991	Deep Run			
	Waverly			
1991–1992	Pointers Run	Mayfield Woods		
1992–1993	Elkridge	Burleigh Manor		
	Forest Ridge			
1993–1994	Rockburn	Mount View		
1994–1995	Manor Woods		River Hill	
1995–1996		Elkridge Landing		
1996–1997	Ilchester		Long Reach	
			Wilde Lake Replacement	
1997–1998	Fulton	Murray Hill		
	Hollifield Station			
1998–1999	Gorman Crossing			
	Triadelphia Ridge			
1999–2000		Bonnie Branch		
		Lime Kiln		
2001–2002		Ellicott Mills Replacement		
2002–2003			Reservoir	Homewood
2003–2004	Bellows Spring	Folly Quarter		
2005–2006			Marriotts Ridge	Cedar Lane
2006–2007	Dayton Oaks			
2007–2008	Veterans			
	Bushy Park Replacement			
2013–2014	Ducketts Lane			
2014–2015		Thomas Viaduct		
2016–2017		Wilde Lake*		
2018–2019	Hanover Hills			

\* Replacement School

## Additions/Renovations Constructed with Assistance From Maryland School Construction Funds (1980–2020)

Completion (School year)	Elementary	Middle	High	Special
1980–1981	Atholton			
1981–1982	Clarksville			
1983–1984	Guilford	Waterloo		
1985–1986			Mt. Hebron	
1986–1987	Guilford			School of Technology
1987–1988			Atholton	
1991–1992			Oakland Mills	
1994–1995	Northfield	Owen Brown		
	Centennial Lane			
	Dasher Green			
1995–1996		Wilde Lake		
		Oakland Mills		
1996–1997	Hammond		Hammond	
1998–1999	Swansfield	Dunloggin		
	Jeffers Hill			
	Waterloo			
2000–2001	Ilchester			
	Pointers Run			
	St. John's Lane			
	Talbott Springs			
2001–2002	Forest Ridge			
	Pointers Run			
2002–2003	Atholton		Centennial	
	Clarksville			
	Hollifield Station			
2003–2004	Fulton	Patapsco	Atholton	
2004–2005	Manor Woods	Clarksville	Mt. Hebron	
	Rockburn		Oakland Mills	
2006–2007	Clarksville		Howard	
	Fulton			
	Pointers Run			
	Triadelphia Ridge			
	All Day K			
2007–2008	All Day K			
	Waverly			
	Centennial Lane			
	Clarksville			
2008–2009	All Day K	Clarksville	Glenelg	
	Centennial Lane			
	Worthington			
2009–2010	All Day K			
	Clemens Crossing			
2010–2011	Waterloo			
2011–2012	Northfield			
	Hammond	Hammond	Hammond	
2012–2013	Bellows Spring		Centennial	
	Thunder Hill			
2013–2014	Bollman Bridge			
	Gorman Crossing			
	Phelps Luck			
	Stevens Forest			
2014–2015	Running Brook			
2015–2016	Longfellow		Atholton	
	Laurel Woods			
2016–2017	Deep Run	Patuxent Valley		
2016–2017	Swansfield			
2018–2019	Waverly			



**I. Policy Statement**

The Board of Education is responsible for providing safe, nurturing, and inclusive educational and work environments for all students and staff. The Board recognizes the continuing need to plan, design, and construct new educational facilities and to renovate or make additions to existing schools that are in accordance with all applicable codes, as well as Maryland and federal law. Fulfilling this responsibility requires a comprehensive program that monitors population trends, enrollment trends, educational program spatial requirements, cost/benefit considerations, technologies that support environmentally responsible construction, and an annual six-year capital improvement program.

**II. Purpose**

The purpose of this policy is to establish guidelines for the administration of the school planning and the school construction programs in the Howard County Public School System (HCPSS).

**III. Definitions**

Within the context of this policy, the following definitions apply:

- A. Architect Firm – A designation usually reserved by law for a person or organization professionally qualified and duly licensed to perform architectural services including, but not necessarily limited to, analysis of project requirements; creation and development of the project design; preparation of drawings, specifications, and bidding requirements; and general administration of the construction contract.
- B. Bid – The price a contractor commits to for constructing a project.
- C. Bid and Award Procedures – Criteria to determine the award of a contract pursuant to Policy 4050 Procurement of Goods and/or Services.
- D. Capital Improvement Program (CIP) – All physical betterments or improvements listed as part of the Board’s annual approved capital budget.
- E. Capital Improvement Project – Any physical betterment or improvement and any preliminary studies and surveys relative thereto, including but not limited to, any property of a permanent nature, and equipment needed in connection with such improvement when first erected or acquired.

- F. Change Order – A written document to the contractor signed by the owner and engineer or architect, issued after the execution of the contract, authorizing a change in the work or an adjustment in the contract sum.
- G. Construction Manager (CM) – A person or organization hired to participate in the preconstruction phase of a project to provide cost estimating, project schedules, constructability reviews, and value engineering services, as well as coordinate and manage the overall project schedule and the construction phases of a project with the objective of minimizing project construction time and cost while maintaining the quality, function, and aesthetics of the building.
- H. Design Phases – The three phases of an architect’s basic services, which include:
  - 1. Schematic Design (SD) – the first phase of the architect's basic services. In this phase, the architect meets with the project planning team to ascertain the requirements of the project and prepares schematic design studies consisting of drawings and other documents illustrating the scale and relationship of the project components for approval by the Board.
  - 2. Design Development (DD) – the second phase of the architect's basic services. In this phase the architect prepares, from the approved schematic design studies, the design development documents for approval by the Board. These design documents consist of drawings and other documents to fix and describe the size and character of the entire project as to structural, mechanical and electrical systems, materials and other essentials as may be appropriate.
  - 3. Construction Documents (CD) – the third phase of the architect's basic services. In this phase the architect prepares, from the approved design development documents, the working drawings, specifications, and necessary bidding information for approval by the Board.
- I. Facility Design – Plans, elevations, sections, and other drawings and specifications that may be necessary for a building or other structure.
- J. Facility Planning – Educational and architectural planning and analysis used to produce and design the concept for school projects.
- K. Interagency Commission on School Construction (IAC) – The state agency responsible for the review/approval of construction documents and funding of schools or school construction projects.
- L. Office of Safety and Security – The HCPSS office that is responsible for reviewing and monitoring the design and construction phases related to security initiatives and safety regulatory compliance.

- M. Office of School Construction – The HCPSS office that is responsible for all phases of planning, design and construction of new schools as well as additions to and comprehensive modernization of existing schools, from planning through occupancy.
- N. Office of School Planning – The HCPSS office that is responsible for projecting needs based on demographics for the purpose of assisting the Superintendent in the development of the Capital Improvement Program.
- O. Relocatable – A prefabricated, stand-alone building providing temporary capacity for a school and that are excluded from program capacity.
- P. Scope Study – Investigation and assessment of needs conducted to determine the magnitude of work for a particular project or facility.
- Q. State of Maryland Public School Construction Program (PSCP) – Program that provides funding for public school construction.
- R. Sustainable Design – Design that seeks to reduce negative impacts on the environment and the health and comfort of building occupants, thereby improving building performance. The objectives of sustainability are to reduce consumption of non-renewable resources, minimize waste, and create healthy, productive environments.
- S. Target Utilization – Enrollment between 90% and 110% utilization of the program capacity of a school facility.
- T. Utilization – The comparison of a facility’s program capacity and its enrollment or projected future enrollment.

#### **IV. Standards**

- A. This policy and associated implementation procedures apply to the capital improvement projects that are listed as part of the Board’s annually approved capital budget, which requires contracts and consultant agreements.
- B. The HCPSS will employ a sustainable design construction that supports educational program needs and creates a safe and nurturing environment for students and staff within allotted budgetary resources.
- C. The school planning/school construction program will include a sequential plan of action and will be divided into the following ten general categories, each requiring professionally trained and experienced staff to plan and carry out the requirements of the program consistent with the Superintendent’s Safety Guidelines for Renovation and Construction Projects and all applicable regulations.
  - 1. Long-Range Planning and Student Population Projection



- a. This category will involve the annual projection of pupil population growth by the Office of School Planning. Short-range demographic studies to support the Capital Improvement Program, school attendance area studies, transportation planning, and other special needs are also included.
- b. By state regulation, the Board is also required to develop, maintain, and annually update a master plan for the school system for submission to the IAC. This plan has as its basis a variety of population studies, which guide the decision making for school facilities on both a long and short-term basis.

## 2. Capital Improvement Program

- a. The Capital Improvement Program is a projection of the school facility needs for the next fiscal year (Capital Budget) and the following five-year period. The Capital Improvement Program will be based on needs to support the educational program of the system with new schools, modernizations, and other construction projects.
- b. The local Capital Improvement Program will serve as the basis for state funding requests through the IAC.

## 3. Site Selection

Procedures for site selection and summarization of site criteria for elementary, middle and high schools are addressed in Policy 6000 Site Selection and Acquisition. As part of the selection process, the Office of School Construction produces studies including site layouts and environmental assessments.

## 4. Architect Firm and Construction Manager Selection

Procedures for architectural and construction management services selection are addressed in Policy 6030 Procurement of Architectural and Construction Management Services.

## 5. Facility Planning and Facility Design

The facility planning and design process allows for orderly and systematic design of school facilities. This process begins with a scope study and will be conducted using either the Board-approved General Educational Specifications for New Elementary Schools, General Educational Specifications for New Howard County Middle Schools, General Educational Specifications for High Schools, or the Board approved Guidelines Manual for Renovations and Modernizations of Existing Schools as the basic references for the facility in question. These documents describe the basic educational philosophy, instructional program, and spatial requirements needed to implement the planning and construction program.

6. Bid and Award

The bid and award procedures for school construction projects conform to those used for the procurement of other goods and services, which are addressed in Policy 4050. In addition, these procedures comply with the funding requirements of the PSCP.

7. Contract and Construction Administration

The Office of School Construction will be responsible for monitoring construction work and administering the schedule, budget, and change orders that affect the scope and/or cost of the work. A school construction progress report, which includes these topics is submitted monthly to the Board.

In accordance with the provisions of Policy 6030, a construction manager may be hired to manage the construction process as well as to collaborate during the feasibility and design phases.

8. Official Acceptance of Capital Improvement Projects

Capital improvement projects may be designed to be accepted in stages or upon total completion of work, based on staff recommendation to and approval by the Board.

9. Post-Acceptance Evaluation

Use, occupancy, and evaluation by staff may occur only after the project has been officially accepted. The Board will receive a final report following the walk-through.

10. Relocatable Facilities

Relocatable classroom units should be considered under the following conditions and within the context of Policy 6010 School Attendance Areas:

- a. Where student population growth occurs
- b. Where utilization is projected to exceed target utilization
- c. When boundary lines are adjusted
- d. Where population is projected to remain above target utilization for at least one year
- e. Where school construction or renovation projects require the provision of swing space to accommodate the student population and minimize the impact on instruction.

Where excess population is projected to remain beyond four years, consideration should be given to an addition or new construction.

- D. To the extent possible, school facilities and sites should be available for after school use by the community. The possibility of joint use development of school and recreational facilities, including joint construction of school and recreational space, is encouraged on a case-by-case basis.

## **V. Responsibilities**

- A. The Superintendent/designee will oversee the overall administration of the school planning and construction programs.
- B. The Office of School Facilities will assist with design reviews and post-construction maintenance.
- C. The Office of the Environment will review and monitor the design and construction phases related to environmental initiatives and occupational regulatory compliance.
- D. The Office of School Planning and the Office of School Construction will collaborate with all appropriate internal and external parties in order to obtain the efficient implementation of this policy.
- E. For capital improvement projects, the principal will communicate project information to the parents and the community in a timely manner.

## **VI. Delegation of Authority**

The Superintendent is authorized to develop appropriate procedures to implement this policy.

## **VII. References**

- A. Legal
  - The Annotated Code of Maryland, Education Article
    - § 4-115 (right to acquire land, school sites or buildings)
    - § 4-116 (land use approval procedures)
    - § 4-117 (construction and remodeling conformance to state and county building codes)
    - § 5-301 (Interagency Commission on School Construction, established)
    - § 5-302 (composition and role of the IAC)
    - § 5-303 (project eligibility and cost-share)
    - § 5-312 (state funding support related to high performance buildings)
  - COMAR 13A.01.02.03 (requirements for obtaining State Superintendent's approval for school construction projects)
  - COMAR 15.05.02 (regulations pertaining to integrated Pest Management and Notification of Pesticide Use in a Public School Building or on School Grounds)
  - Americans with Disabilities Act (ADA)
  - Occupational Safety and Health Act (OSHA)

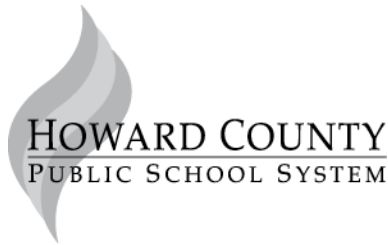


Maryland Occupational Safety and Health Act (MOSHA)

- B. Other Board Policies
  - Policy 1040 Safe and Supportive Schools
  - Policy 4050 Procurement of Goods and/or and Services
  - Policy 6000 Site Selection and Acquisition
  - Policy 6010 School Attendance Areas
  - Policy 6030 Procurement of Architectural and Construction Management Services
- C. Relevant Data Sources
- D. Other
  - General Educational Specifications for New Elementary Schools
  - General Educational Specifications for New Howard County Middle Schools
  - General Educational Specifications for High Schools
  - Guidelines for the Use of Relocatables
  - Guidelines Manual for Renovations and Modernizations of Existing Schools
  - Safety Guidelines for Renovation and Construction Projects

**VIII. History**

ADOPTED: September 4, 1968  
 REVIEWED:  
 MODIFIED: August 14, 2014  
               November 1, 2018  
 REVISED: September 13, 1990  
               January 14, 2010  
 EFFECTIVE: November 1, 2018



## **POLICY 6020-IP IMPLEMENTATION PROCEDURES**

### **SCHOOL PLANNING/SCHOOL CONSTRUCTION PROGRAMS**

Effective: November 1, 2018

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These procedures apply to the construction of new schools and the modernization/renovation of existing facilities that are included in the Board's Capital Improvement Program.

#### **I. Definitions**

Within the context of these implementation procedures, the following definitions apply:

- A. Beneficial Occupancy – The use by the owner of a project or portion thereof before all the terms of the contract are complete.
- B. Bonds – General obligation documents issued by the county to borrow money to fund capital projects.
- C. Final Occupancy – The point at which all or a designated portion of a building complies with the provisions of a contract and all applicable county and state statutes and regulations.
- D. Projection Methodology – Procedure to develop student enrollment projections that includes, but is not limited to historical cohort survival ratios, birth rates, new housing units, housing resales, apartment turnover and net migration.
- E. Punch List – List made near the completion of work, indicating items to be furnished or work to be performed by the contractor or subcontractor in order to complete the work as specified in the contract documents.
- F. Warranty/Guarantee Period – Period of time in which the quality of work and/or satisfactory performance is guaranteed.

#### **II. Long-range Planning and Student Population Projection**

The Office of School Planning will:

- A. Gather enrollment, birth, population, and housing data from appropriate sources.
- B. Provide an annual projection using the cohort survival method or other established projection methodology.
- C. Provide an annual report of projection accuracy to the Board of Education.

### **III. Capital Improvement Program**

The Office of School Planning and the Office of School Construction will:

- A. Develop the Capital Improvement Program based on student population growth and anticipated needs of that population.
- B. Present the Board's requested six-year Capital Improvement Program, which includes a request for the next fiscal year (capital budget) and the following five-year period.
- C. Prepare the State of Maryland Public School Construction Program (PSCP) budget funding request.
- D. Incorporate the state budget request with the Board six-year Capital Improvement Program to determine the annual county Capital Improvement Program request.
- E. Select and analyze potential school site(s).

### **IV. Site Selection**

Site selection and acquisition is recommended to the Board after being analyzed for appropriateness for a school. (See Policy 6000 Site Selection and Acquisition.)

### **V. Architect Firm and Construction Manager Selection**

Procurement of architectural and construction management services are recommended to and approved by the Board in compliance with Policy 6030 Procurement of Architectural and Construction Management Services.

### **VI. Facility Planning and Facility Design**

A facility planning team is convened, consisting of school and community members, personnel from the Office of School Construction, a designee from the Office of Safety and Security, other Central Office personnel, such as the Offices of the Environment, Facilities, Food and Nutrition Services, Pupil Transportation, the project architect, construction manager, and others who may be named by the Superintendent/designee. The planning team provides input to the architect in developing a series of three design studies that meets Board policy as well as the objectives of the applicable educational specifications or renovation guidelines.

The series of three design phase studies are as follows:

- A. Schematic Design Phase
  - 1. Planning team named by the Superintendent/designee
  - 2. Description of conceptual design



3. Initial cost analysis
4. Presentation to and approval by the Board.

B. Design Development Phase

1. Description of the design
2. Detailed layouts of subject areas
3. Cost analysis
4. Presentation to and approval by the Board.

C. Construction Documents Phase

1. Description of the final design
2. Cost analysis and cost reduction
3. Final review of drawings and specifications
4. Presentation to and approval by the Board
5. Preparation of bid documents.

The above steps may be combined. In each phase, the effect on the occupants, the building structure, and/or systems is considered. Each phase is submitted for review and approval by the Board and the Interagency Commission on School Construction (IAC). Copies of the Howard County Public School System (HCPSS) response to the design submission review letters from the IAC approving agencies will also be submitted to the Board.

## **VII. Bid and Award**

Pursuant to Policy 4050 Procurement of Goods and/or Services, these procedures call for a publicly announced bid period during which interested bidders examine the bid documents and submit a sealed bid by the date and time required. The bid documents are opened in public and the price submitted for each bid item is read aloud. At a subsequent meeting of the Board, the results of the bid are presented and a recommendation to award to the lowest responsible and responsive bidder is made.

The final decision is made by the Board. Upon submission of all documents, bonds, and other matters required in the contract, a formal contract is signed.

## **VIII. Contract and Construction Administration**

A. Office of School Construction

The project architect administers the contract, answers technical questions, approves submittals, and initiates change orders and requests for proposals subject to the Board's approval. The Office of School Construction coordinates the completion schedule with the principal/designee and other school system personnel to ensure that furniture and equipment deliveries, technology services, and food services satisfy the requirements for their respective sections. Prior to

the opening of school, the Office of School Construction monitors each project to resolve any last minute problems and continues this supervision during the warranty period.

The Office of School Construction supervises the construction, budget, schedule, and quality of work, administers change order requests, and administers the warranty period. When school projects are technically complex, have a very short construction time, or require staff attention beyond the time available, a construction manager may be hired to manage the construction process.

**B. Offices of the Environment, Facilities and Safety and Security**

The Offices of the Environment, Facilities and Safety and Security monitor the design and construction phases at regular intervals and in response to specific concerns. Consistent with all statutory requirements, monitoring includes Integrated Pest Management (IPM), Indoor Air Quality (IAQ), and abatement of potentially hazardous materials.

**IX. Official Acceptance of Capital Improvement Projects**

New facilities and other capital improvement projects may be accepted in several ways. If conditions permit, the school system will wait until all major and minor building system corrections are fully complete and all minor repairs, deficiencies and discrepancies (punch list items) have been corrected. The project architect will then certify that the building is complete and has been constructed according to the drawings and specifications. This marks the beginning of the warranty/guarantee period for the building. School facilities are typically scheduled so that all construction will be complete and the building ready for acceptance in early summer. Final inspection and acceptance involves a review of the project at substantial completion of construction, which includes listing items to be adjusted, corrected, or completed by the contractor's "punch list." In most cases, the project is complete except for minor system work and completion of the punch list items by late summer.

The Office of School Construction is responsible for certifying, as applicable, beneficial occupancy, final occupancy, move-in, punch list, and warranty/guarantee.

**X. Post-Acceptance Evaluation**

- A. After project acceptance, furnishings and movable equipment can be installed, supplies can be delivered and stored, and the staff can occupy the facility for operation. At this time, the construction project enters into a one year guarantee and a two year mechanical/electrical guarantee period during which time discrepancies in the workmanship, materials, and equipment supplied under the contract are noted and corrected. Some specifically identified warranties/guarantee periods may be longer than one to two years.

- B. Following the move-in, the Office of School Construction works closely with the school administration and maintenance personnel to correct any problems that arise during the warranty period.
- C. After the first instructional year following construction, a walk-through of the facility is conducted to evaluate the success of the facility as a teaching environment and the success of the educational concepts in the General Elementary Educational Specifications for New Schools, or General Educational Specifications for New Howard County Middle Schools, or General Educational Specifications High Schools or Guidelines Manual for Renovations and Modernizations of Existing Schools in effect at the time the project was designed. The facility is also evaluated as to use of materials, building systems, construction quality, and other aspects pertaining to the building.
- D. A walk-through of the building by a representative team of stakeholders may include a:
  - 1. Teacher representative
  - 2. Administration personnel
  - 3. Custodian
  - 4. PTA representative
  - 5. School facilities representative(s); and
  - 6. Designee from the Offices of Safety and Security.

## **XI. Relocatable Facilities**

Placement of relocatable facilities is determined by and implemented as follows:

- A. Presentation of student population projections.
- B. Identification of where new units are needed.
- C. Evaluation of site plans.
- D. Evaluation of cost implications.
- E. Presentation to and approval by the Board.
- F. Reassignment or procurement of units.
- G. Installation of units.



- H. Post installation inspection by the Office of School Construction.

## **XII. History**

ADOPTED: September 13, 1990

REVIEWED:

MODIFIED: November 1, 2018

REVISED: January 14, 2010

EFFECTIVE: November 1, 2018