

# Proposed Capital Improvements Program Fiscal Years 2024-33

Prince William County School Board Work Session  
January 11, 2023

Vernon J. Bock, Chief Operating Officer  
John M. Wallingford, Chief Financial Officer



# Capital Improvements Program (CIP)

## Agenda

- Discuss the CIP Process
- Receive Recent CIP Project Highlights
  - Completed, In-Process, To Bid
- Factors Impacting the CIP
  - Construction/Building Cost Inflation
  - Updated Enrollment Projections
- Review Changes in the Proposed CIP
  - Construction
  - Renovation
  - Maintenance
- Next Steps

## Definition

- An ongoing plan for
  - new construction/additions
  - renewals of existing facilities
  - upgrading of the School Division's infrastructure, including technology and energy improvements
- A cumulative process that builds upon the prior year's Capital Improvements Program
- A blueprint of the work to be done over the next 10-year period as determined by
  - assessments of building infrastructure needs
  - school capacities
  - school space utilization patterns
- A list of specific capital improvements proposed over the next 10-year period
- A plan based on the updated enrollment projections and fiscal limitations (debt service and budget constraints)



## Process

- Follows same basic methodology each year
  - Review enrollment data and projections
  - Review available funding
  - Continue focus on maintaining portfolio of existing facilities and structures
- Incorporates Division's Strategic Plan
- Reflects School Board's Sustainability Initiative



# New School Construction

## Additions - Completed

- Gainesville Middle School (11 classrooms)
- Reagan Middle School (six classrooms)



## New School Construction – In Progress

- “Rosemount Lewis” Elementary School

## To Bid

- Woodbridge Area Elementary







# Renovation Projects

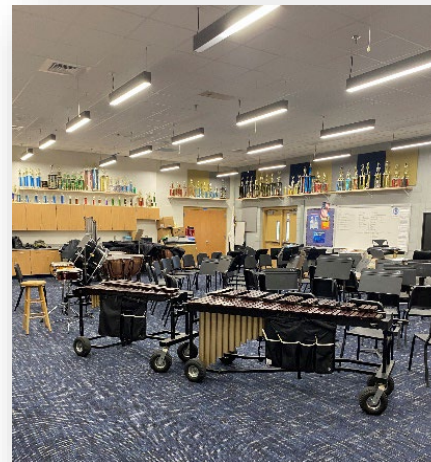
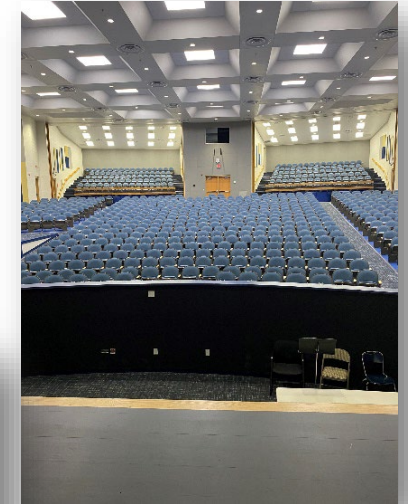
## Completed

- Bennett Elementary School



## In progress – Completion: Summer 2023

- Hylton High School
- Parkside Middle School
- Signal Hill Elementary School
- Bristow Run Elementary School



## To bid

- Cedar Point Elementary School
- Swans Creek Elementary School
- Benton Middle School







# School-Based Projects

## Fenestration Improvements

- Osbourn Park High School: Completed
- Unity Reed High School: Summer 2023 Completion
- Graham Park Middle School: Begins Summer 2023

## Site Improvements

- Brentsville High: Summer 2023 Completion
  - Practice Turf, Stadium Lights, Restroom Building
- Hylton High School: Spring 2023 Completion
  - Artificial Turf
- Beville Middle School: Completed
  - Parking Lot Paving





# School-Based Projects

## Site Improvements

- Potomac High School: Summer 2023 Completion
  - School Track Paving
  
- Tennis Court Paving
  - Benton Middle School: Completed
  - Forest Park High School: Completed
  - Bull Run Middle School: Summer 2023 Completion
  - Battlefield High School: Summer 2023 Completion





# Upcoming Projects

## Renovations

- Brentsville Transportation Center
- Featherstone Elementary School
- Woodbridge High School – Cosmetology Lab
  
- Gar-Field High School
  - Artificial Turf
  - Concession Building
  - Fenestration Improvements
  
- Osbourn Park High School
  - Artificial Turf
  - Concession Building
  - Eight-Lane Track

## Rippon Middle School

- Artificial Turf with Lighting

## Woodbridge High School

- Fenestration Improvements



# Energy Management and Sustainability Projects

## LED Lighting Replacements

- Enterprise Elementary
- Kerrydale Elementary
- Marumsco Hills Elementary
- Minnieville Elementary
- Potomac View Elementary
- Fitzgerald Elementary
- Loch Lomond Elementary
- The Nokesville School
- Sinclair Elementary
- Tyler Elementary
- Victory Elementary
- Additional LED Lighting Conversions Proposed

- Smart Irrigation Controls
- Building Automation Controls Upgrades



# Roofing Projects

## Roof Replacements – Complete

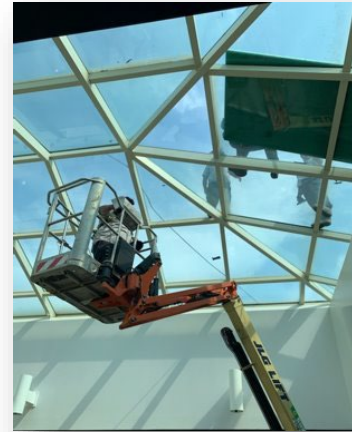
- Battlefield High School
- Freedom High School
- Neabsco Elementary School

## Roof Replacements – Summer 2023 Completion

- Forest Park High School
- Osbourn Park High School

## Roof Replacements – Starting Summer 2023

- Rippon Middle School





# CIP – HVAC Projects – Partial and Full Replacements

Completed	In Progress
Battlefield HS	Brentsville HS
Potomac HS	Graham Park MS
Pattie ES	Unity Braxton MS
West Gate ES	
Ellis ES	

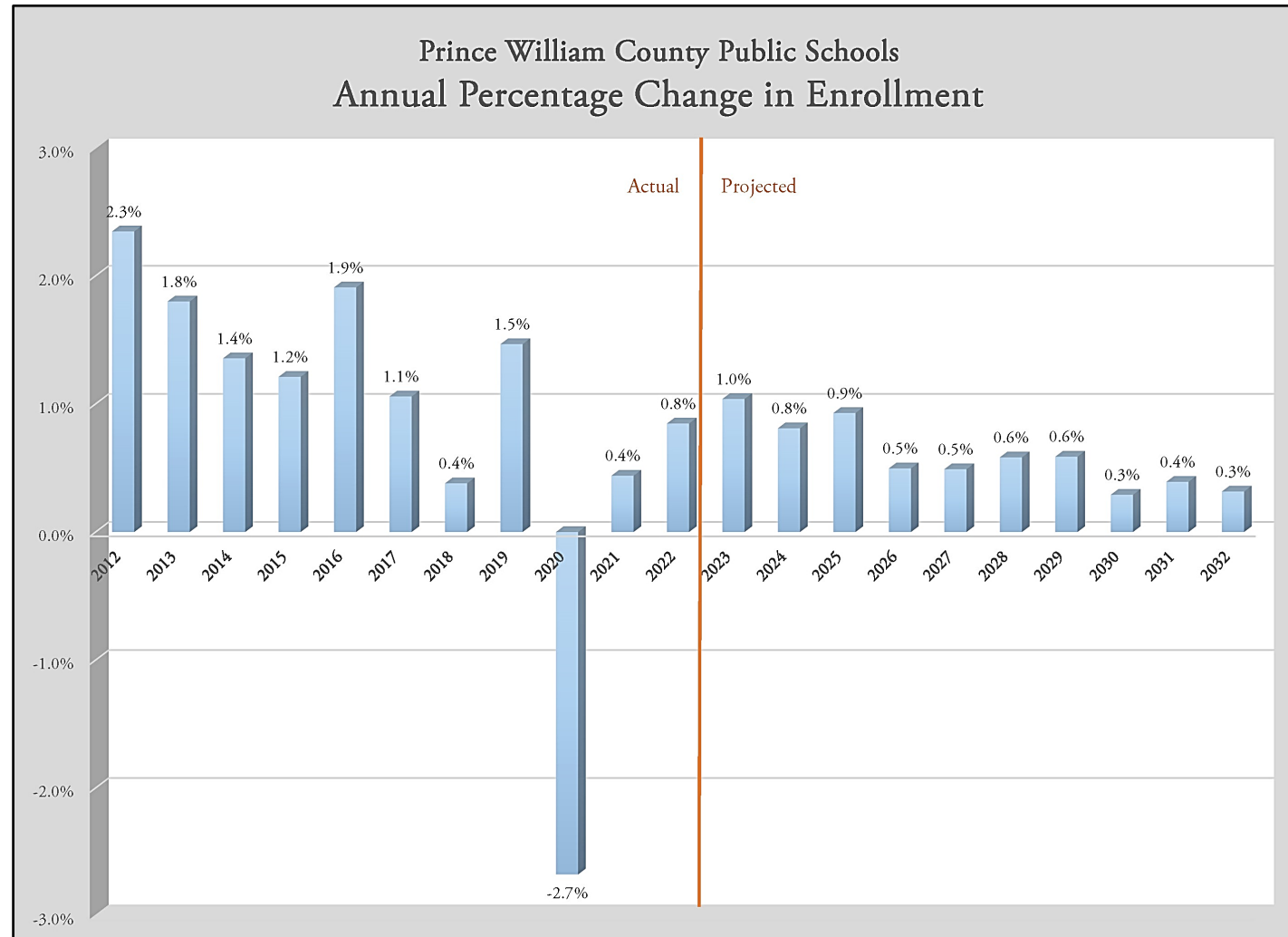
➤ Projects Supported by Federal / State Grants

## Upcoming Projects

Summer 2023	Summer 2024	Summer 2025
Coles ES	Bel Air ES	Washington-Reid PK
Woodbridge MS	Enterprise ES	Rippon MS
Freedom HS	Woodbridge HS	Gar-Field HS



# Projected Enrollment Change





## Construction / Building Cost Inflation

- Post-pandemic construction cost inflation has been unbridled
  - Costs of materials, labor, fuel (esp. diesel) have surged
  - Supply chain anomalies have drastically increased lead-times required to acquire fabricated goods
    - HVAC Equipment (fan coil units – 50-week lead time)
    - Electrical Equipment (switch gears – 60-week lead time)
- Significant cost uncertainty at the present time
- Impact of policy changes
  - High Performance Building Design
  - Prevailing Wage



## Additional Project Cost Impacts

- High Performance Building Design
  - 20% cost increase per project
  - Estimated addition of \$131.1M to 10-Year CIP
- Prevailing Wage
  - 15% cost increase per new construction project
  - 10% cost increase per renovation project
    - Less site work, steel construction, having less complex labor requirements
- Estimated increase of \$140.9M to 10-Year CIP



# High Performance Building Design (Sustainability Initiative)

## – Strategic Plan Commitment

- Will allow the School Division to meet our stated Sustainability and Carbon Reduction goals. We cannot achieve these goals with traditional construction methods and existing systems
- School Board approved the Sustainability Initiative on June 10, 2020, to include HPBD in new buildings and renovations
- Strategic Plan, Commitment 2, Objective 2.3
  - By 2024, HPB principles will be incorporated into all school renovations and new construction projects





## High Performance Building Design (Sustainability Initiative)

- Building envelope and windows - higher efficiency and thermal value
- Geothermal heating and cooling systems
- “Smart building” monitoring of mechanical systems (monitoring-based commissioning)
- Constructed to be solar-ready
- 50% of materials should be sourced sustainably and embodied carbon measured
- Paybacks/Return on Investment
  - Average of 25% less energy consumed
  - 10% less water consumed
  - 30% reduction in CO2 output
  - Improved staff and student performance due to improved lighting, indoor air quality and acoustics, all part of indoor environmental quality

## Benefits of Prevailing Wage

- Prevailing wage rates are established regionally by the US Dept. of Labor and based on a review of collective bargaining agreements and surveys of local contractors
- Prevailing wage laws
  - Establish a more consistent rate of pay within the skilled labor market
  - Could improve wages and benefits for the local skilled labor market
  - Can provide a more skilled labor workforce
  - Encourage more apprenticeship training and safer workplaces



## Bond Funding Schedule Changes

Debt Sales		
Fiscal Year	FY 2023	FY2024
FY 2024	\$114,000,000	\$186,795,000
FY 2025	\$150,408,180	\$258,871,882
FY 2026	\$159,985,586	\$303,880,300
FY 2027	\$79,105,000	\$136,130,000
FY 2028	\$57,229,714	\$88,887,714
FY 2029	\$60,220,286	\$92,920,000
FY 2030	\$74,704,000	\$98,184,000
FY 2031	\$162,704,000	\$125,033,000
FY 2032	\$74,841,000	\$317,058,000
FY 2033	-	\$124,320,000
Totals	\$933,197,766	\$1,732,079,896

Debt Service Increase	
Fiscal Year	Amount
FY 2024	-
FY 2025	\$11,712,219
FY 2026	\$19,138,784
FY 2027	\$17,573,632
FY 2028	\$3,021,758
FY 2029	\$522,729
FY 2030	\$1,798,049
FY 2031	\$2,498,497
FY 2032	\$7,693,081
FY 2033	\$18,375,244
Totals	\$82,333,993

# Examples of School Cost Increases

School	Year Open	Total Base School Cost	Pct Change (Inflation)	High Performance Building Design (20%)	Prevailing Wage (15%)	FY24 Total	FY23 Total (old)	Pct Change from FY23	Downey & Scott Cost Estimate 12/10/22	Pct Change from FY23
Woodbridge Area ES	<b>2024</b>	\$61,764,000	48.6%	-	-	<b>\$61,764,000</b>	\$41,559,000	48.6%	<b>\$85,566,000</b>	105.9%
Occoquan ES Replacement	<b>2025</b>	\$63,792,000	7.6%	\$12,562,000	\$11,454,000	<b>\$87,808,000</b>	\$59,282,000	48.1%	<b>\$122,355,600</b>	106.4%
Potomac Shores Area ES	<b>2026</b>	\$66,265,000	46.0%	\$13,253,000	\$11,928,000	<b>\$91,446,000</b>	\$45,392,000	101.5%	<b>\$106,427,000</b>	134.5%
Route 1 South Area ES	<b>2032</b>	\$86,734,000	60.1%	\$17,347,000	\$15,613,000	<b>\$119,694,000</b>	\$54,161,000	121.0%	<b>\$134,097,000</b>	147.6%
Yorkshire Area ES	<b>2032</b>	\$86,734,000	60.1%	\$17,347,000	\$15,613,000	<b>\$119,694,000</b>	\$54,161,000	121.0%	<b>\$134,097,000</b>	147.6%
14th High School	<b>2026</b>	\$233,729,000	48.9%	\$45,407,000	\$41,871,000	<b>\$321,007,000</b>	\$156,963,000	104.5%	<b>\$356,319,000</b>	127.0%





# Renovation Cost Increases

Year to Complete	Facility	FY24 Base Project Cost	Pct Change (Inflation)	High Performance Building Design (20%)	Prevailing Wage (10%)	FY24 Total Cost	Pct Diff from FY23 Cost	Downey & Scott Estimate	Pct Diff from FY23 Cost	FY23 Cost
2024	Swans Creek ES	\$16,054,200	26.2%	-	\$1,605,420	<b>\$17,660,000</b>	38.8%	\$24,322,000	37.7%	<b>\$12,722,000</b>
2024	Cedar Point ES	\$14,383,200	28.0%	-	\$1,438,320	<b>\$15,822,000</b>	40.8%	\$22,738,000	43.7%	<b>\$11,234,000</b>
2024	Transportation - Brentsville	\$7,616,000	28.0%	-	\$761,600	<b>\$8,378,000</b>	40.8%	\$11,897,000	42.0%	<b>\$5,950,000</b>
2025	Benton MS	\$21,412,800	12.9%	-	\$2,141,280	<b>\$23,555,000</b>	24.2%	\$32,355,000	37.4%	<b>\$18,960,000</b>
2025	Featherstone ES	\$15,681,780	31.3%	-	\$1,568,178	<b>\$17,250,000</b>	44.5%	\$24,587,000	105.9%	<b>\$11,940,000</b>
2025	Transportation - Potomac	\$2,985,000	35.7%	-	\$298,500	<b>\$3,284,000</b>	49.3%	-	-	<b>\$2,200,000</b>
2026	Brentsville HS	\$40,835,297	19.4%	-	\$4,083,530	<b>\$44,919,000</b>	31.3%	\$73,679,000	115.4%	<b>\$34,207,000</b>
2026	Graham Park MS	\$17,859,280	21.0%	-	\$1,785,928	<b>\$19,646,000</b>	33.1%	\$34,031,000	130.5%	<b>\$14,765,000</b>
2026	Transportation - Central	\$3,150,000	43.2%	-	\$315,000	<b>\$3,465,000</b>	57.5%	-	-	<b>\$2,200,000</b>
2027	Lynn MS	\$34,181,418	13.0%	\$6,836,284	\$4,101,770	<b>\$45,120,000</b>	49.2%	\$58,424,000	93.2%	<b>\$30,246,000</b>
2027	Transportation - McCuin	\$3,308,000	50.4%	\$661,600	\$396,960	<b>\$4,367,000</b>	98.5%	-	-	<b>\$2,200,000</b>
2028	Unity Braxton MS	\$30,526,754	15.6%	\$6,105,351	\$3,663,211	<b>\$40,296,000</b>	52.6%	\$55,596,000	110.5%	<b>\$26,407,000</b>
2028	Woodbridge MS	\$30,775,610	19.5%	\$6,155,122	\$3,693,073	<b>\$40,624,000</b>	57.7%	\$55,370,000	115.0%	<b>\$25,758,000</b>



## Potential Solutions to Consider – Managing CIP Cost Increases

Solution	Impact
Provide additional cash from the sale of debt	Increased Debt Service costs; less general fund cash for other priorities; e.g., classroom instruction
Reduce project costs through value engineering	Inequity in building qualities, lack of follow through on Sustainability Initiatives
Delay projects to yield annual cost reductions	Continued overcrowding in areas; potential disappointment of stakeholders
Eliminate or delay implementation of High-Performance Building Design - \$131.1M potential savings	Non-conformity to Strategic Plan
Combination of some of or all the above	



## Proposed CIP – FY24 Changes

- New School Construction: 2031-2032
  - Route 1 South Area Elementary
  - Yorkshire Area Elementary
- Renovations
  - No changes
  - Awaiting Facility Condition Assessments to evaluate renovation priorities
- Safety Improvements
  - CTE – power safety shutoffs
- HVAC Investments
  - Antietam Elementary – Chiller
  - Bel Air Elementary – HVAC
  - Brentsville High – Chiller
  - Colgan Aquatics Center
  - Kelly Leadership Center
- Site Access/Parking Improvements
  - Washington-Reid PK

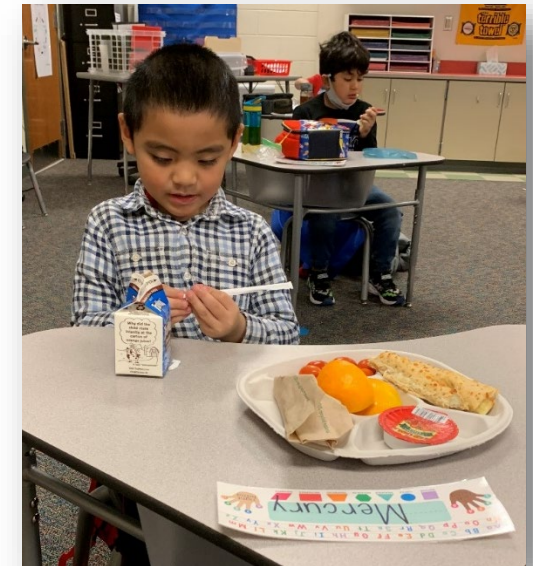


## Proposed CIP – FY24 Changes

- Secure Vestibules
  - Bull Run MS
  - Gainesville MS
  - Marsteller MS
- LED Lighting Upgrade Program
  - Additional year included
- Neabsco Elementary School
  - Elevator replacement and exterior ADA measures
- Maintenance Improvements
  - Water Heater replacement program
  - Dust Collection Systems
- Security Upgrades
  - Hampton Middle School – Security Residence Modular
- Kelly Leadership Center
  - Addition postponed indefinitely

## School Maintenance and Repair

- Asphalt Upgrades
- Electrical Improvements
- Energy Infrastructure Improvements
- Fenestration
- HVAC Equipment and Controls Upgrades
- Kitchen Upgrades
- Municipal Separate Storm Sewer Systems
- Plumbing Improvements
- Roof Replacements
- Full and Partial Replacements
- Skylights
- Gutters
- Portable Classroom Relocation
- Title IX Improvements



# Incorporating the Strategic Plan

Commitment

## 2 Positive Climate and Culture

Values Spotlight



### Objective 2.3:

PWCS facilities will be welcoming, safe, and sustainable.



PWCS will have at least five schools earn the U.S. Department of Education Green Ribbon School designation



100%

of all School Division facilities provide a welcoming environment conducive to learning by meeting PWCS established standards of quality and all applicable building code regulations

10%

reduction of Division-wide greenhouse gas emissions year over year between FY23-FY26



Complete the first Net Zero new construction school replacement in PWCS



of schools will actively integrate Environmental Literacy into all grade levels



# Incorporating the Strategic Plan



## Objective 4.3:

PWCS will ensure that our strategic priorities are driving our investments.



PWCS will align budgetary and capital improvement plan targets based on a solid long-term financial plan



PWCS will complete eight school renovations between FY23 and FY26

## Incorporating the Strategic Plan

- Division-wide maintenance and facility plan
- High-quality learning experiences that promote Environmental Literacy
- Project-based learning, utilizing the school building as a teaching tool
- High-performing maintenance strategies and construction standards
- Base CIP investments on a facility condition index

### Focus on sustainability:



Energy Management  
Department  
established  
in 2011



2021 Green Ribbon  
School District  
Sustainability  
Award winner



Over \$59 million in  
cost avoidance  
savings



2020 Green Schools  
Challenge winner

## New Classroom Space Overview FY 2024-33

Completion Date	School
August 2023	“Rosemount Lewis” Elementary
August 2024	“Woodbridge Area” Elementary
August 2025	Occoquan Elementary (Replacement)
August 2026	14 <sup>th</sup> High
August 2026	“Potomac Shores Area” Elementary
August 2032	“Route 1 South Area” Elementary
August 2032	“Yorkshire Area” Elementary



## Facility Renovation Overview FY 2024-33

Completion Date	School
June 2023	Hylton High
June 2023	Bristow Run Elementary
June 2023	Signal Hill Elementary
June 2023	Parkside Middle
June 2024	Swans Creek Elementary
June 2024	Cedar Point Elementary
June 2025	Benton Middle
June 2025	Featherstone Elementary
June 2026	Graham Park Middle
June 2026	Brentsville High
June 2027	Fred Lynn Middle
June 2028	Unity Braxton Middle
June 2028	Woodbridge Middle



# CIP Summary FY 2024-33

FY 2024-33 CIP	Total	Bond	General Fund Transfer	VDOE Grants	5-Year Total	10-Year Total
New Construction	\$789,962,000	\$789,962,000	\$0	\$0	\$550,574,000	\$789,962,000
Renovation	\$938,886,000	\$835,048,254	\$103,837,746	\$0	\$370,759,000	\$938,886,000
Specific School Project	\$34,724,880	\$30,260,880	\$4,464,000	\$0	\$34,724,880	\$34,724,880
Maintenance	\$192,027,000	\$42,075,742	\$146,312,129	\$3,639,129	\$117,648,000	\$192,027,000
Grand Total	\$1,955,599,880	\$1,697,346,876	\$254,613,875	\$3,639,129	\$1,073,705,880	\$1,955,599,880



## Advertised CIP Five-Year Summary FY 2024-28

Existing Conditions	
Projected Growth in Students (2022-27)	3,448
Student Enrollment (September 30, 2022)	90,226
Student Enrollment (September 30, 2027)	93,674
Current Student Capacity	94,482
Current Portable Classrooms in Use	171

Proposed Capital Improvements Program	
New School Facilities	5
New Elementary Schools (Replacement: 1)	4
New Middle Schools	-
New High Schools	1
School Additions (Classrooms)	-
Elementary Additions	-
Middle Additions	-
High Additions	-
Proposed Capacity to be Constructed	4,785
Proposed Costs	
New Facility Construction (New Schools, Additions, and Replacements)	\$550,574,000
Renovations	\$370,759,000
Specific School-Based Projects	\$34,724,880
Maintenance and Repair	\$117,648,000
Total	\$1,073,705,880





## Budget Timeline

January 11	School Board CIP Work Session
February 1	Proposed Budget Presented to School Board
February 6	School Board Budget Public Meeting
February 15	School Board Budget Public Hearing
March 8	Final School Board Budget Markup
March 15	CIP/Budget Approval

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