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BUILDING THE FUTURE:

Investing in the WPS School Facilities

In Partnership with
Worcester
Education
Collaborative 

<https://www.wrrb.org/reports/2024/02/building-the-future-investing-in-worcester-public-schools-facilities/>

RESEARCH IN THE PUBLIC INTEREST



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Why Are School Facilities Important?

Ex: New Doherty Memorial High School

- \$314 million
- City borrowed \$23 million for increased costs from inflation
- State has provided \$80 million already, additional funding has been approved

Photo courtesy of Josh Wingell

THE BUREAU'S RECENT DATA TOOL



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Understanding Your Neighborhood Schools:

Explore our interactive dashboard to learn more about each elementary, middle and high school, and their catchment zones!

www.wrrb.org

Highschools

Select the School Catch Zone

- Burncoat Senior High School
- Claremont Academy
- Doherty Memorial High School
- North High School
- South High Community School

General Population Demographics (2022 ACS)

Total Population: 44,098

**Race/
Ethnicity**

Age

Median Age

34.2

Educational Attainment

	Less Than Highschool	Highschool Graduate	Bachelor's or Higher
Population 18-24	6,950	7.5%	27.7%
Population 25 and over	28,455	17.4%	29.3%
Population 25-34	7,297	89.0% <small>HS Graduate or Higher</small>	38.9%

Income

	Median Household Income	Mean Household Income
Total Households:	\$59,372.2	\$75,543.7

Catchment Zone

Esri, NASA, NGA, USGS | Cit... Powered by Esri

School Population (WPS FY24 Budget and DESE)

Year built:	1992	Square Footage:	185,475
Enrollment	Student/Teacher Ratio	Teachers Licensed (DESE 2023)	Experienced Teachers (2023)
1,242	13.6	98.8%	98.8%

**Race/
Ethnicity**

Selected Populations

THE IMPORTANCE OF SCHOOL FACILITIES



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There is robust literature on the positive impacts of school facilities investments. These impacts are felt in realms of life such as:

- Student learning outcomes
- Housing markets
- Health and well-being of students and staff
- Mitigating climate change through eco-friendly construction
- Community engagement and equitable project selection
- School safety

“Districts that serve more socio-economically disadvantaged students tend to benefit more from facilities investments, experiencing larger increases in both test scores and housing prices.”

THE BUREAU'S APPROACH



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Three pronged approach to analyzing WPS school facilities:

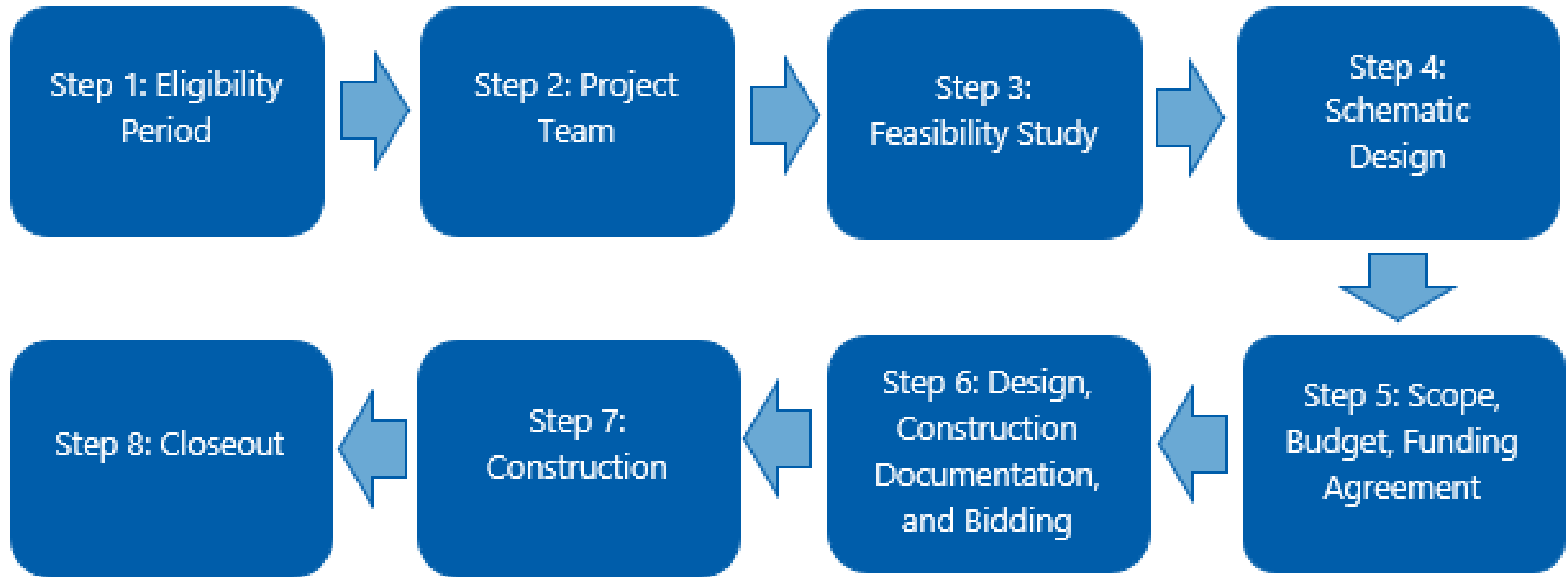
- 1) Analyzes **Worcester's partnerships with the Massachusetts School Building Authority (MSBA)** and compares Worcester's projects to peer cities across Massachusetts.
- 2) Examines the City and District's efforts to improve school facilities, such as the **Capital Improvement Plan, the WPS Strategic Plan**, and countless innovative initiatives to enhance facilities.
- 3) Re-examines the **District's 2017 Facilities Master Plan** to identify trends across the 28 oldest schools of the 46 campuses. This involved combining data from the plan with 2017 student data from DESE.

RESEARCH IN THE PUBLIC INTEREST

MSBA Project Pipeline



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As well as a Post-Occupancy Evaluation

WORCESTER AND THE MSBA



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City of Worcester has key leadership role in school facilities with MSBA, not just Worcester Public Schools

Ongoing and Recent MSBA Projects:

- New Doherty High School (\$314 million) expected to open in Fall 2024.
- Worcester Arts Magnet School's roof replacement (\$7 million). Approved in 2020. Construction complete and final audit approved.

A History of Worcester's Projects (2011-2023):

- Average cost of Core Program (Reconstruction) Projects: **\$193.7 million.**
- Average cost of Accelerated Repair Projects (ARP): **\$2.7 million.**

WORCESTER AND THE MSBA



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Worcester's Competitive Footing with Peer Cities from 2011-2023:

- #2 highest in ARP Projects secured.
- #2 highest in Core Projects secured.
- #2 highest in total costs for ARP projects (\$88 million), and second lowest in average ARP costs (\$2.7 million).

Overall, Worcester is one of the leading Gateway Cities in securing a high number of relatively cost-effective MSBA projects over the past 13 years.

Comparing Worcester's MSBA Projects to Peer Cities in Massachusetts

Peer Cities	Accelerated Repairs	Core
Boston	38	2
Worcester	31	3
Springfield	28	5
Lowell	15	1
Brockton	13	1
New Bedford	11	1
Lynn	8	1
Lawrence	3	2

WORCESTER AND THE MSBA



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An additional Worcester project in the MSBA pipeline:

On December 13, 2023, **Burncoat High School** was invited to work with the MSBA. The project is now in the **Feasibility Study** phase, which will clarify the project's scope.

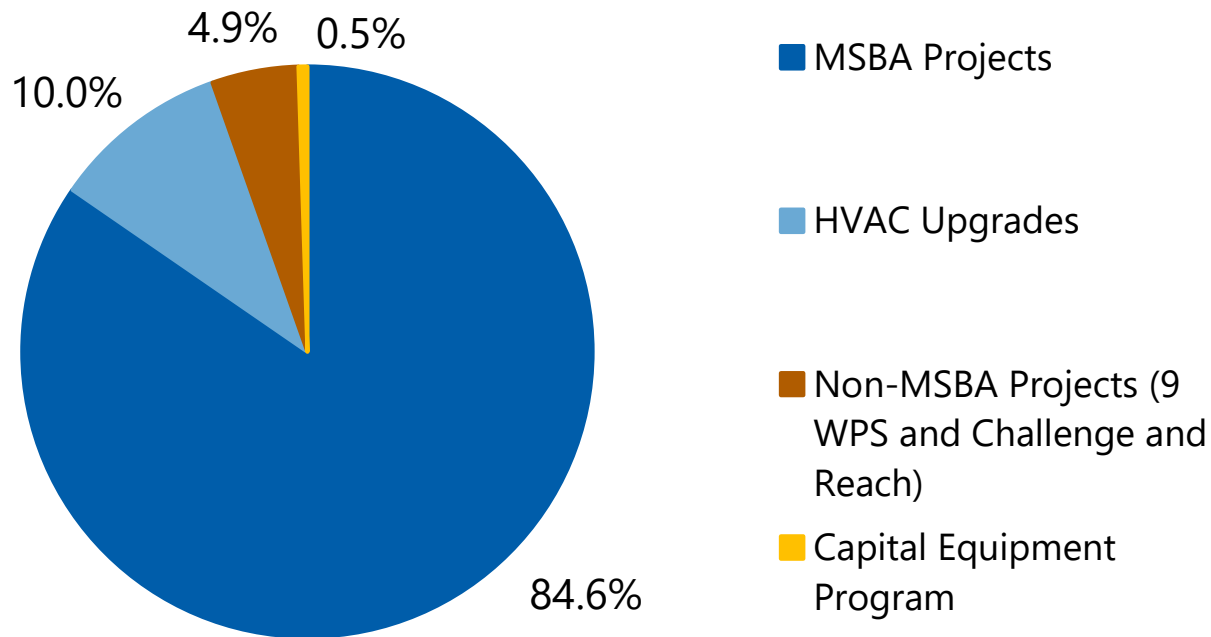
The City, District, and MSBA will decide if Burncoat Middle School will be included in the project's scope. This is because the two schools have connected infrastructure.

THE CITY'S FY 2024 CAPITAL IMPROVEMENT PLAN



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Breakdown of the City's FY 2024 Capital Improvement Plan (WPS Facilities Only)



Source: The City of Worcester's FY 2024 Capital Improvement Plan

The plan totals **\$100.5 million for WPS in FY 2024**

- \$85.1 million for MSBA projects
- \$4.9 million for non-MSBA projects and a sprinkler upgrade to the Challenge and Reach Academy
- \$10 million for HVAC upgrades
- \$500k for the Capital Equipment Plan

THE CITY'S FY 2024 CAPITAL IMPROVEMENT PLAN



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- The City's contribution to the FY 2024 Capital Improvement Plan includes:
 - **\$48.5 million** for MSBA projects (Doherty and Worcester Arts Magnet). The MSBA is providing \$36.6 million in FY 2024 for both projects.
 - **\$3.5 million** for 9 non-MSBA repair projects across WPS
 - **\$500,000** for capital equipment upgrades across WPS, including Chromebooks, vehicle maintenance, and technological advancements.
 - **\$1.4 million** to upgrade the Challenge and Reach Academy's sprinkler system

CREATIVE INITIATIVES BY THE CITY OF WORCESTER



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- **In 2020, the City spent \$15 million on HVAC upgrades** in WPS while student learned remotely
- **Following a recommendation from the City Manager, the City has allocated \$1 million** from an unexpected increase in the FY 2024 tax levy toward school facilities investments
- **The City Manager and Superintendent of Schools** are engaged in unprecedented discussions on school facility needs and potential responses

CREATIVE INITIATIVES BY THE WORCESTER PUBLIC SCHOOLS



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WPS has also made significant efforts to enhance school facilities:

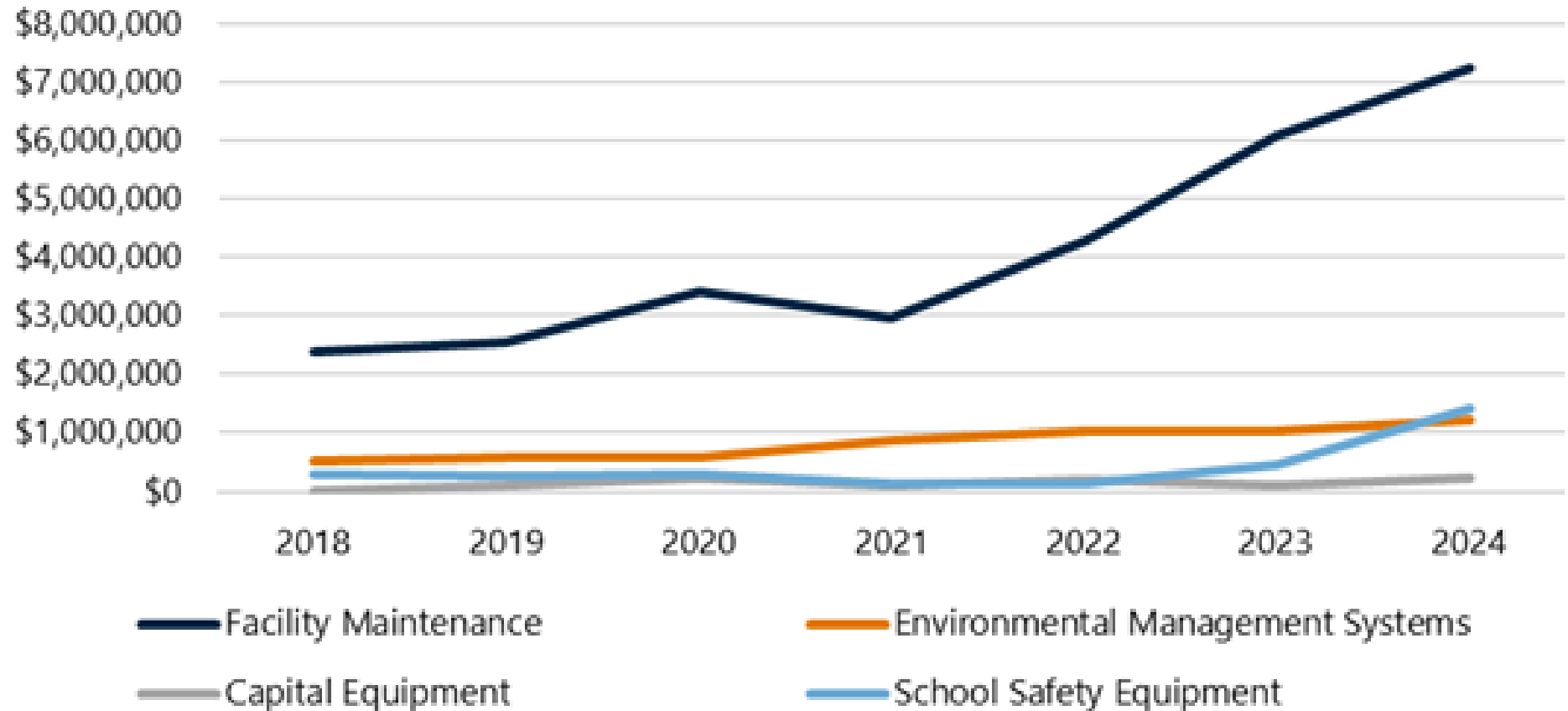
- A comprehensive **safety audit**, which identified areas of improvement across the District
- A new Strategic Plan with a dedicated section on facilities, including:
 - **A new Facilities Master Plan for the 2027-2028 school year**
 - An update to the District's maintenance reporting and response systems to enhance timely repairs.
 - Advocacy for **more state and local resources** dedicated to facilities in the school's general fund
- **\$22 Million in ESSER funding through Fall 2024 for 'Honeywell Project'**
 - Investments in automated control upgrades, exhaust fan replacements, rooftop units, and heating systems

CREATIVE INITIATIVES BY THE WORCESTER PUBLIC SCHOOLS



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Facilities-Related Line Items from the WPS Budgets (FY 18-24)



ANALYSIS OF THE DISTRICT'S 2017 FACILITIES MASTER PLAN

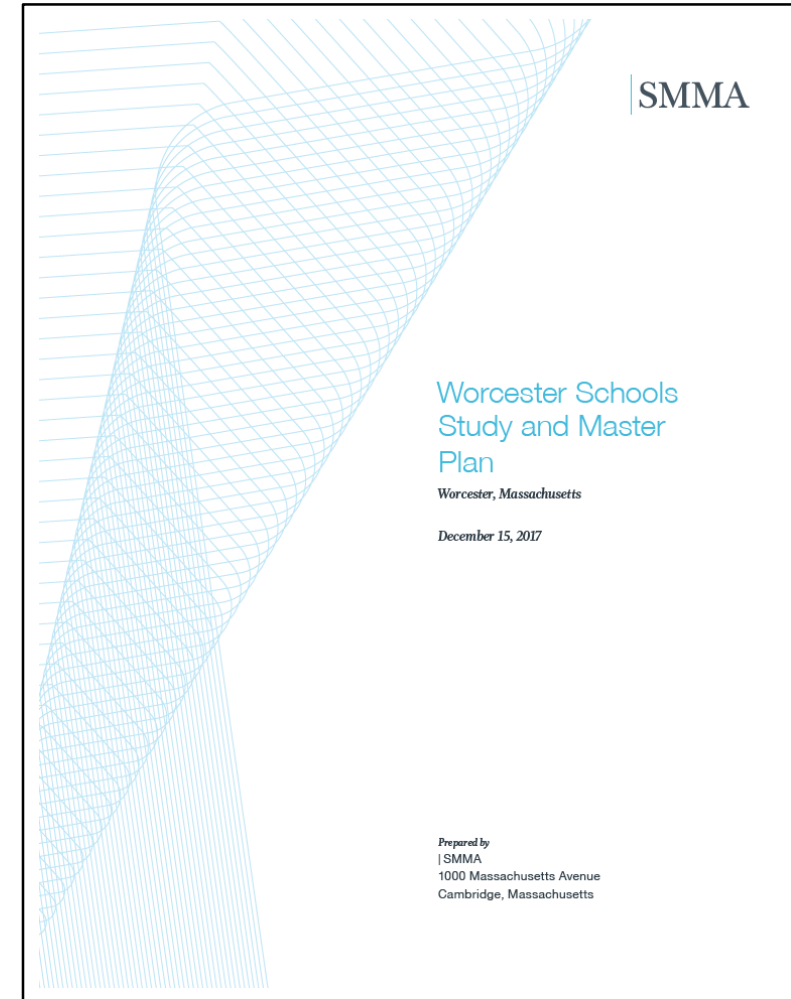


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2017 Facilities Master Plan by SSMA:

- Studied 28 of the District's oldest schools
- Evaluated each building's infrastructural components and provided condition assessments.
- Provided 2018 cost projections for each school, including:
 - Urgent repair costs of **\$70 million**
 - Overall repair costs of **\$260 million**
 - Replacement costs of **\$447 million**

<https://worcesterschools.org/about/departments-offices/facilities-management/wps-study-master-plan/>



ANALYSIS OF THE DISTRICT'S 2017 FACILITIES MASTER PLAN



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The Bureau's Exploration: Descriptive Statistics

- Compared to the District-wide distribution of students, the sample of 28 schools:
 - Under-represented Hispanic, Black/African American, and Asian students, and over-represented White and Multi-Race, Non-Hispanic.
 - Under-represented the number of Students on IEPs, while over-represented students who are English Language Learners and Economically Disadvantaged.

ANALYSIS OF THE DISTRICT'S 2017 FACILITIES MASTER PLAN



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Further Exploration and Correlative Findings

- The Bureau found that the **square footage of each building had the strongest relationship with higher repair, urgent repair, and replacement costs.**
- The Bureau also explored the relationship between schools in this sample with greater numbers of historically underserved populations and the three types of repair costs estimated in the Facilities Master Plan.
- Overall, there is a strong, positive **correlation** between schools with higher numbers of Hispanic, Black/African American, Economically Disadvantaged, and “IEP students” and higher repair and replacement costs. **This is not the case for schools with more White students.**

ANALYSIS OF THE DISTRICT'S 2017 FACILITIES MASTER PLAN



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Limitations and Caveats:

- Correlation does not imply causation.
- Data in the Facilities Master Plan and demographic data are 7 years old.
- The number of independent variables relative to the sample size is too small for more robust statistical analysis to prove these relationships with greater statistical rigor.
- There are other variables and contextual factors outside the scope of this analysis that may explain these findings.

FIVE RECOMMENDATIONS



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Recommendation 1: Develop a data-driven priority list of the district's neediest schools:

- Build upon previous plans' evaluations.
- Prioritize urgent repair and reconstruction projects.
- Justify recommendations with specific metrics.
- Develop short and long-term plans.
- Make plans publicly available for input.

Recommendation 2: Ensure a data-driven, transparent and equitable selection process for future facilities projects:

- Seek multi-stakeholder input through the adoption, development, and construction of school building projects.
- Seek input from historically underserved populations, in particular, to ensure equitable decision-making.

FIVE RECOMMENDATIONS



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Recommendation 3: Further examine correlations between student demographics and facility needs across the District

- Initial results based on only 28 schools and 47% of student body in 2017
- Develop policy solutions to address any inequities across race, socioeconomic status, and other indicators

Recommendation 4: Consider Consolidating Small, Pre-WWII Schools

- This draws on the previous Facilities Master Plan's recommendation.
- Consider factors such as needs, proximity, population and enrollment predictions, and lot sizes.
- Identify optimal lots, if necessary

FIVE RECOMMENDATIONS



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Recommendation 5: Advocate for further state investment in school facilities

- Partner with fellow leaders in Gateway cities, as well as legislators to strategize for more funding
- Consider differentiated funding pools for urban districts to address student enrollment and limited resources
- Consider expanding the reimbursement rate to include land acquisition, ADA compliance, and other costs.

Thank you



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