# 2024 EWD COMMITTEE STAFF REPORT ON PGCPS' SCORE ON THE IAC'S MAINTENANCE EFFECTIVENESS ASSESSMENT

Annual Report

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## **Executive Summary**

The Interagency Commission on School Construction's (IAC) annual Maintenance of Maryland's Public School Buildings report provides an "overview of maintenance assessments conducted at selected school facilities in each Maryland public school system." The report assesses how well Maryland school systems can maintain their educational buildings. The assessment rubric inspects 23 areas within five (5) groups, and the score is divided into "Superior," "Good," "Adequate," "Not Adequate," and "Poor." Deficiencies identified may be designated either "Minor" or "Major" if they meet key criteria and school systems may improve their final score by adequately mitigating them within a reasonable timeframe.

Prince George's County Public Schools (PGCPS) has consistently received among the lowest scores in the State. In FY 2024, the school system increased its score by around 3.5% to 67.5%, but this score is still within the "Not Adequate" category. PGCPS had 64 (23.4%) of the 274 minor deficiencies and the only major deficiency in the State. This is an improvement from 306 (31.4%) of the 974 minor deficiencies identified when the assessment began in FY 2021.

#### **Why This Matters**

A low maintenance score indicates that a school system is not adequately maintaining their buildings and systems. This effectively reduces expected lifespan and may result in more frequent upkeep and replacement of buildings, systems, and structures within a school.

In the yearly report, the IAC consistently recommends that PGCPS catalog all their assets, systems, and structures with asset tags and auto-populate preventative maintenance (PM) work orders in a Computerized Maintenance Management System (CMMS) so that maintenance work is done at industry-standard frequencies that ensure the full lifespan of the item.

<sup>&</sup>lt;sup>1</sup> IAC Maintenance of Maryland's Public School Buildings FY 2024 Annual Report, page 4.

## Maintenance of Maryland's Public School Buildings Report

The Interagency Commission on School Construction's (IAC) annual Maintenance of Maryland's Public School Buildings report provides an "overview of maintenance assessments conducted at selected school facilities in each Maryland public school system."<sup>2</sup>

The current report structure began in FY 2021 and measures a school system's ability to *maintain* its school buildings.<sup>3</sup> Lack of adequate maintenance of school buildings may result in a decreased expected lifespan and require more frequent school construction over one that is optimally maintained.

#### Funding and Staffing Recommendations

The IAC recommends the following full-time equivalent (FTE) positions per gross square feet (GSF) to properly upkeep and maintain a building:<sup>4</sup>

| Maintenance (APPA Level 2: Comprehensive Stewardship) | 1.0 per 67,456 GSF |
|---|--------------------|
| Custodial (APPA Level 2: Ordinary Tidiness)           | 1.0 per 16,700 GSF |
| Upkeep of Grounds (APPA Level 2: High Level)          | 1.0 per 10 acres   |

Additionally, the IAC recommends budgeting the following percentage of a facility's current replacement value (CRV):<sup>5</sup>

| Operations & Routine Maintenance (preventive and reactive) | 2% of facility CRV |  |
|--|--------------------|--|
| Capital Maintenance (system renewal)                       | 2% of facility CRV |  |

#### The Scoring System

Facilities and school systems are evaluated based on a score of "Superior," "Good," "Adequate," "Not Adequate," and "Poor."

|                          | Maintenance is likely to extend the life of systems within the facility beyond their expected lifespans.  |
|--------------------------|---|
| Adequate                 | Maintenance is sufficient to achieve the life of each system within the facility and, with appropriate capital spending and renewal, the total expected lifespan. |
| Not Adequate<br>and Poor | Maintenance is insufficient to achieve the expected lifespans of systems within the facility.   |

<sup>&</sup>lt;sup>2</sup> IAC Maintenance of Maryland's Public School Buildings FY 2024 Annual Report, page 4.

<sup>&</sup>lt;sup>3</sup> Nota bene: Results before FY 2021 are not comparable to those identified in prior years.

<sup>&</sup>lt;sup>4</sup> IAC Maintenance of Maryland's Public School Buildings FY 2024 Annual Report, page 8.

<sup>&</sup>lt;sup>5</sup> *Ibid*.

<sup>&</sup>lt;sup>6</sup> *Ibid.*, pages 11 and 13.

| Scaled Score Range | Overall Rating |
|--------------------|----------------|
| 90% to 100%        | Superior       |
| 80% to 89%         | Good           |
| 70% to 79%         | Adequate       |
| 60% to 69%         | Not Adequate   |
| 0% to 59%          | Poor           |

| Category Rating | Rating Criteria   |
|-----------------|---|
| Superior        | No problems or issues visible; and  |
|                 | Evidence that only normal preventive maintenance is required.   |
| Good            | Evidence of systems functioning normally with no signs of deterioration, corrosion, leaks, or delivery issues;                      |
|                 | Evidence of issues that may require minor repairs or cleanup but do not affect<br>structural integrity or intended uses; and        |
|                 | Evidence of routinely above-standard custodial and maintenance practices.   |
| Adequate        | Evidence of systems functioning normally with few signs of deterioration, corrosion, leaks, or delivery issues;                     |
|                 | • Evidence of issues that may require repairs or cleanup but do not significantly affect structural integrity or intended uses; and |
|                 | Evidence of regular competent custodial and maintenance practices.  |
| Not             | Systems are not functioning as intended;  |
| Adequate        | Evidence of significant deterioration, corrosion, leaks, or delivery issues;  |
|                 | Evidence of issues requiring significant repairs or replacement; or   |
|                 | Evidence of inconsistent custodial or maintenance practices.  |
| Poor            | System is nonfunctional or unsafe to operate;   |
|                 | Evidence of extensive deterioration, corrosion, leaks, or delivery issues;  |
|                 | Evidence of issues requiring extensive repairs or replacement; or   |
|                 | Evidence of consistently sub-standard custodial or maintenance practices.   |

Identified deficiencies during school facility inspection are identified as "Minor" or "Major."

| Туре                | Definition  | Category Rating<br>Reduction |
|---------------------|---|------------------------------|
| Minor<br>Deficiency | Poses a <u>potential threat</u> to life, safety, or<br>health of occupants; delivery of educational<br>programs or services; or the expected<br>lifespan of the facility. | -34%                         |
| Major<br>Deficiency | Poses an immediate threat to life, safety, or health of occupants; delivery of educational programs or services; or the expected lifespan of the facility.                | -100%                        |

<sup>&</sup>lt;sup>7</sup> IAC <u>Maintenance of Maryland's Public School Buildings FY 2024 Annual Report</u>, page 11.

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A school system may request the elimination of a given score penalty when the system has provided sufficient evidence in a timely manner that the identified deficiency has been remediated or is in the process of remediation.<sup>8</sup>

The assessment rubric used by the IAC divides a school facility into the following 21 categories within four (4) groups, to be weighed according to those that may have the greatest potential impact on teaching and learning.<sup>9</sup>

| Group              | Category   | Weight |  |  |  |  |  |
|--------------------|--|--------|--|--|--|--|--|
| Site               | 1. Roadways, Parking Lots, & Walkways                                  | 5      |  |  |  |  |  |
|                    | 2. Grounds   | 3      |  |  |  |  |  |
|                    | 3. Positive Site Drainage Away from Structure(s)                       | 8      |  |  |  |  |  |
|                    | 4. Playgrounds, Equipment, & Fields                                    | 4      |  |  |  |  |  |
|                    | 5. Relocatables & Additional Structures                                |        |  |  |  |  |  |
| Building Exterior  | 6. Exterior Structure & Finishes                                       | 6      |  |  |  |  |  |
|                    | 7. Roof Drains, Gutters, & Downspouts                                  | 7      |  |  |  |  |  |
|                    | 8. Windows, Caulking, & Skylights                                      | 3      |  |  |  |  |  |
|                    | 9. Entryways & Exterior Doors  | 7      |  |  |  |  |  |
|                    | 10. Roofs, Flashing, and Gravel Stops                                  | 7      |  |  |  |  |  |
| Building Interior  | 11. Interior Doors, Walls, Partitions, & Finishes                      | 3      |  |  |  |  |  |
|                    | 12. Floors   | 3      |  |  |  |  |  |
|                    | 13. Interior Cleanliness & Appearance (incl. of Equip. Rooms)          | 6      |  |  |  |  |  |
|                    | 14. Ceilings   | 3      |  |  |  |  |  |
|                    | 15. Interior Lighting  | 5      |  |  |  |  |  |
| Building Equipment | 16. HVAC: Forced-air Heating, Ventilation, & Air Cond. (incl. Filters) | 10     |  |  |  |  |  |
| & Systems          | 17. Electrical Distribution & Service Equipment                        | 3      |  |  |  |  |  |
|                    | 18. Boilers, Water Heaters, Steam, & Hot-water Distribution            | 8      |  |  |  |  |  |
|                    | 19. Plumbing Fixtures and Equipment                                    | 5      |  |  |  |  |  |
|                    | 20. Fire and Safety Systems & Utility Controls                         | 10     |  |  |  |  |  |
|                    | 21. Conveyances  | 5      |  |  |  |  |  |

Additionally, the rubric includes two (2) categories under Maintenance Management: 10

| Group                     | Category   | Weight |
|---------------------------|--|--------|
| Maintenance<br>Management | 22. Preventive Maintenance (PM)                                    | 15     |
| Wanagement                | 23. Computerized Maintenance Management System (incl. Equip. Data) | 14     |

<sup>&</sup>lt;sup>8</sup> IAC Maintenance of Maryland's Public School Buildings FY 2024 Annual Report, page 11.

<sup>&</sup>lt;sup>9</sup> *Ibid.*, page 12.

<sup>&</sup>lt;sup>10</sup> *Ibid.*, page 13.

#### The Assessment<sup>11</sup>

Prior to the visit, the IAC provides each school district with the list of school facilities to be assessed. The school system is required to provide key facility data in advance, including maintenance records. This has remained constant from fiscal year 2021, when the assessment began, through fiscal year 2025. Subsequent assessments will not include prior notification to the school systems.

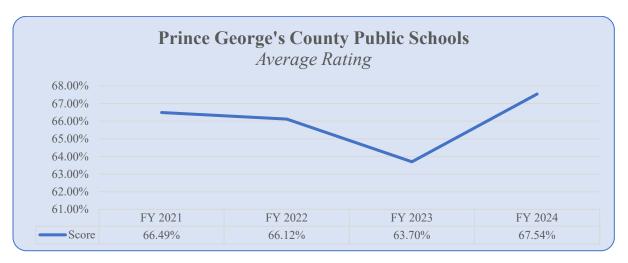
During the site visit, the assessor examines each of the identified components that make up the facility's score.

After the visit, the assessor completes the preliminary MEA report, which is sent to the school system for review. The school system has 15 calendar days to respond to any requested information in the report. If the school system mitigates any identified issues in an adequate and timely manner, the score may be updated to reflect the current condition of the facility.

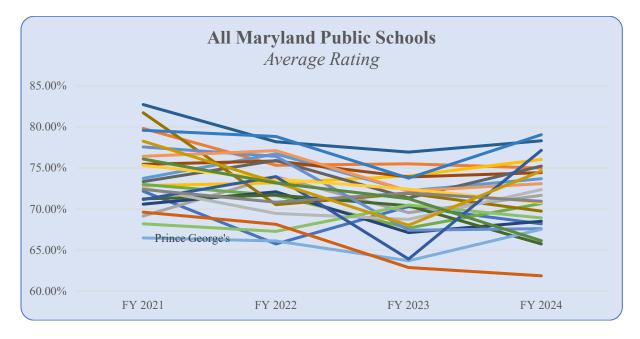
<sup>&</sup>lt;sup>11</sup> IAC Maintenance of Maryland's Public School Buildings FY 2024 Annual Report, page 15.

## Prince George's County Public Schools Score

The score for Prince George's County Public Schools, from FY 2021 to FY 2024, is traced in the chart below. While the average rating decreased in the initial three (3) years, FY 2024 saw an increase of 3.63% to 67.54%. Despite this gain, Prince George's County is still within the "Not Adequate" category. To be considered Adequate, a school system must score above 70%.



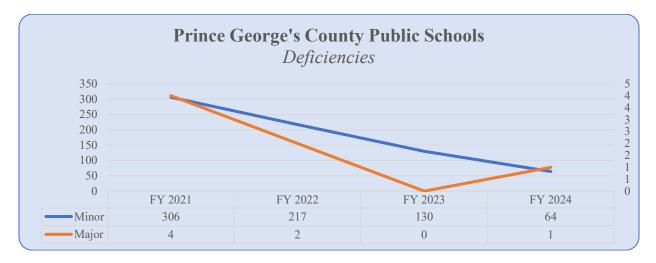
The chart below traces the average rating for all Maryland school systems. Prince George's County scored last in FY 2021 (66.49%), penultimate in FY 2022 (66.12%) and FY 2023 (63.70%), and fourth from last in FY 2024 (67.54%). 12



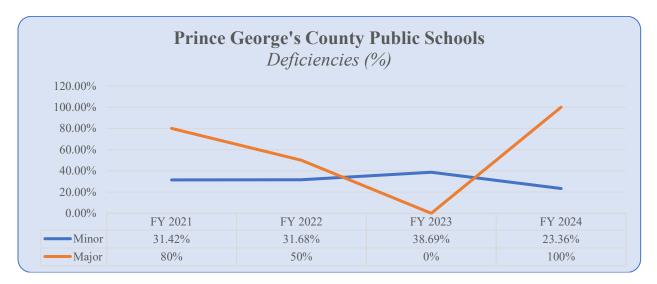
The total number of deficiencies identified for Prince George's County is traced in the chart below. The deficiencies identified for the County have decreased since FY 2021, as have all identified

<sup>&</sup>lt;sup>12</sup> Summary charts of average school system ratings can be found in the appendix.

deficiencies for all school systems. Whereas in FY 2021, the IAC identified 974 minor and 5 major deficiencies, in FY 2024, it identified only 274 minor and 1 major deficiency.



The chart below identifies the percentage of all deficiencies in Prince George's County. While total deficiencies identified have decreased (see chart above), the County accounted for almost one-third of all minor deficiencies reported in fiscal years 2021 through 2023 and almost one-fourth of minor deficiencies in FY 2024. The County had the following major deficiencies in each fiscal year: in FY 2021, four (4) of the five (5); FY 2022, two (2) of the four (4); FY 2023, zero (0) of two (2); and FY 2024, the one (1) major deficiency in the State.



The IAC Recommendations

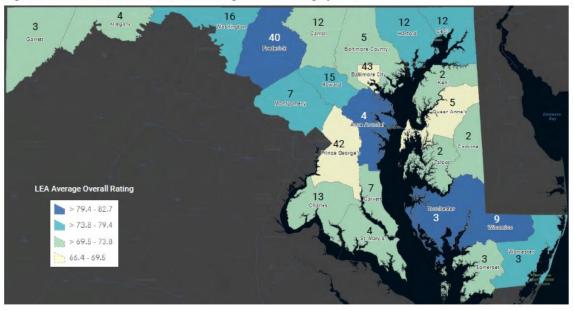
The IAC's recommendations for Prince George's County Public Schools consistently encourage the school system to create a robust Computerized Maintenance Management System (CMMS) that tags all assets, systems, and structures with auto-populating, preventative maintenance (PM) work orders. This recommendation has been a constant concern since the first report in FY 2021. Below is a summary of all recommendations from the IAC for each of the four fiscal years.

| RECOMMENDATIONS  |      |      |      |      |
|--|------|------|------|------|
|  | 2021 | 2022 | 2023 | 2024 |
| Catalog all assets, systems, and structures with auto-populating |      |      |      |      |
| PM work orders in a Computerized Maintenance Management          | X    | X    | X    | X    |
| System (CMMS) so that inspections and maintenance occur at       | Λ    | Λ    | Λ    | Λ    |
| industry-standard frequencies.                                   |      |      |      |      |
| Preventative Maintenance (PM) tasks and custodial checklists     |      | X    |      |      |
| should have auto-populating work orders created in CMMS.         |      | Λ    |      |      |
| All equipment and building parts should be tagged with asset tag |      | X    | X    |      |
| that can link to a work order in CMMS.                           |      | Λ    | Λ    |      |
| Regularly scheduled inspections of parking lots and walkways.    | X    |      | X    |      |
| Preventive and corrective maintenance of HVAC systems            | X    |      |      |      |
| tracked on CMMS for regularly scheduled maintenance.             | 71   |      |      |      |
| Regular playground and field inspections, tracking on CMMS.      | X    | X    |      | X    |
| Regular emergency lights inspections, tracking on CMMS.          | X    |      |      |      |
| Create and implement an integrated pest management (IPM)         |      |      | X    |      |
| plan.  |      |      | 71   |      |
| Schedule and inspect fire and safety systems and components      |      |      | X    | X    |
| using tracked CMMS.  |      |      | 71   | 71   |
| DLLR-regulated equipment inspections need to be scheduled        |      |      | X    |      |
| and completed at the appropriate frequency.                      |      |      | 21   |      |
| Corrective work orders should be created in CMMS immediately     |      |      |      | X    |
| following any inspection identifying a deficiency.               |      |      |      | Λ    |
| CMMS should have a field tracking the days each work order       |      |      |      |      |
| has aged, to help identify causes of possible bottlenecks and    |      |      |      | X    |
| streamline workflow. Fields should also track labor hours and    |      |      |      | 71   |
| costs to establish predictable trends.                           |      |      |      |      |

# Appendix A: FY 2021 Maintenance Effectiveness Assessment 13

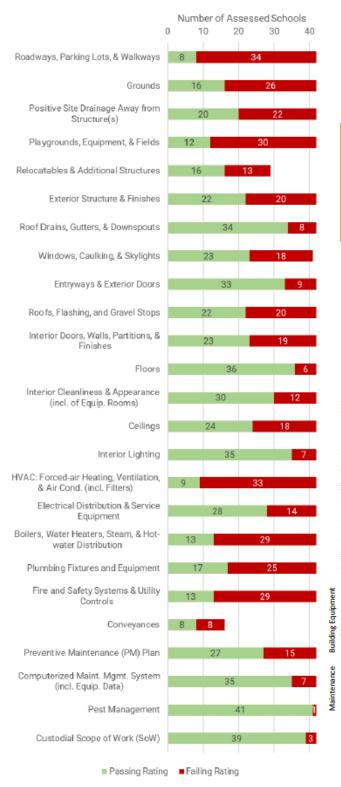
|                 | LEA C                | haracteristics in | n FY21                  | FY2:         | 1 Mainten | ance Assessme | nt Results | ;         |
|-----------------|----------------------|-------------------|-------------------------|--------------|-----------|---------------|------------|-----------|
|                 | Total # of<br>School | Total Square      | Average<br>Adjusted Age | # of Schools | # of      |               |            | iciencies |
| LEA             | Facilities           | Footage           | of Schools              | Assessed     | LEA Ave   | erage Rating  | Major      | Minor     |
| TOTALS          | 1377                 | 141,918,669       | 30                      | 268          | 73.88%    | Adequate      | 5          | 974       |
| Allegany        | 22                   | 1,749,398         | 34.3                    | 4            | 72.17%    | Adequate      | 0          | 19        |
| Anne Arundel    | 121                  | 13,847,996        | 28.2                    | 4            | 79.81%    | Good          | 0          | 1         |
| Baltimore City  | 149                  | 16,885,420        | 37.0                    | 43           | 69.15%    | Not Adequate  | 1          | 290       |
| Baltimore Co    | 165                  | 16,846,193        | 31.9                    | 5            | 72.85%    | Adequate      | 0          | 25        |
| Calvert         | 26                   | 2,463,800         | 23.4                    | 7            | 73.74%    | Adequate      | 0          | 17        |
| Caroline        | 10                   | 952,622           | 23.4                    | 2            | 72.99%    | Adequate      | 0          | 5         |
| Carroll         | 40                   | 4,176,741         | 30.3                    | 12           | 70.59%    | Adequate      | 0          | 54        |
| Cecil           | 29                   | 2,242,569         | 29.0                    | 12           | 75.44%    | Adequate      | 0          | 17        |
| Charles         | 39                   | 4,091,386         | 28.6                    | 13           | 73.35%    | Adequate      | 0          | 37        |
| Dorchester      | 14                   | 949,120           | 33.5                    | 3            | 81.72%    | Good          | 0          | 4         |
| Frederick       | 68                   | 6,814,336         | 27.1                    | 40           | 82.72%    | Good          | 0          | 14        |
| Garrett         | 13                   | 741,671           | 33.0                    | 3            | 71.24%    | Adequate      | 0          | 10        |
| Harford         | 53                   | 6,137,963         | 30.1                    | 12           | 77.56%    | Adequate      | 0          | 12        |
| Howard          | 76                   | 8,250,880         | 19.6                    | 15           | 76.41%    | Adequate      | 0          | 21        |
| Kent            | 5                    | 440,226           | 42.8                    | 2            | 72.57%    | Adequate      | 0          | 1         |
| Montgomery      | 209                  | 25,107,150        | 24.1                    | 7            | 75.31%    | Adequate      | 0          | 24        |
| Prince George's | 196                  | 18,399,159        | 38.3                    | 42           | 66.49%    | Not Adequate  | 4          | 306       |
| Queen Anne's    | 14                   | 1,302,733         | 20.0                    | 5            | 68.20%    | Not Adequate  | 0          | 40        |
| St. Mary's      | 27                   | 2,300,101         | 24.6                    | 4            | 71.15%    | Adequate      | 0          | 25        |
| Somerset        | 10                   | 671,356           | 20.3                    | 3            | 69.62%    | Adequate      | 0          | 17        |
| Talbot          | 7                    | 572,216           | 19.5                    | 2            | 72.39%    | Adequate      | 0          | 5         |
| Washington      | 46                   | 3,447,181         | 34.0                    | 16           | 78.26%    | Adequate      | 0          | 7         |
| Wicomico        | 24                   | 2,242,600         | 28.4                    | 9            | 79.59%    | Good          | 0          | 9         |
| Worcester       | 14                   | 1,285,852         | 25.6                    | 3            | 76.09%    | Adequate      | 0          | 14        |

Figure 1: Number of Assessments and Average Overall Rating by LEA



<sup>&</sup>lt;sup>13</sup> FY 2021 Maintenance Effectiveness Assessment.

#### FY21 Passing vs Failing Rating per Category

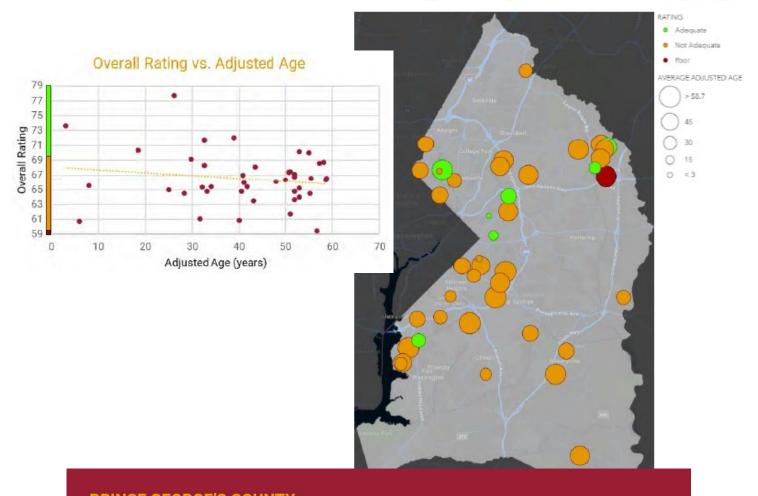


## FY 2021 Overall Rating Results by School Type

|              | Alternate | Special<br>Ed. | Elementary | Elementary/<br>Middle | Middle | High |    |
|--------------|-----------|----------------|------------|-----------------------|--------|------|----|
| Superior     |           |                |            |                       |        |      |    |
| Good         |           |                |            |                       |        |      |    |
| Adequate     |           |                | 5          |                       | 1      | 1    | 7  |
| Not Adequate | 1         | 1              | 22         | 2                     | 6      | 2    | 34 |
| Poor         |           |                | 1          |                       |        |      | 1  |
| Totals       | 1         | 1              | 28         | 2                     | 7      | 3    | 42 |

| Category  | # of Major<br>Deficiencies | # of Minor<br>Deficiencies |
|---|----------------------------|----------------------------|
| Roadways, Parking Lots, & Walkways  | 0                          | 29                         |
| Grounds   | 1                          | 18                         |
| Positive Site Drainage Away from Structure(s)   | 0                          | 14                         |
| Playgrounds, Equipment, & Fields  | 1                          | 23                         |
| Relocatables & Additional Structures  | 0                          | 11                         |
| Exterior Structure & Finishes   | 0                          | 18                         |
| Roof Drains, Gutters, & Downspouts  | 1                          | 5                          |
| Windows, Caulking, & Skylights  | 0                          | 10                         |
| Roof Drains, Gutters, & Downspouts Windows, Caulking, & Skylights Entryways & Exterior Doors  | 0                          | 5                          |
| Roofs, Flashing, and Gravel Stops   | 1                          | 12                         |
| Interior Doors, Walls, Partitions, & Finishes   | 0                          | 17                         |
| Floors Interior Cleanliness & Appearance (incl. of Equip. Rooms) Ceilings   | 0                          | 6                          |
| Interior Cleanliness & Appearance (incl. of Equip. Rooms)   | 0                          | 10                         |
| Ceilings  | 0                          | 15                         |
| Interior Lighting   | 0                          | 6                          |
| HVAC: Forced-air Heating, Ventilation, & Air Cond. (incl. Filters)  | 0                          | 25                         |
| Electrical Distribution & Service Equipment   | 0                          | 13                         |
| Boilers, Water Heaters, Steam, & Hot-water Distribution   | 0                          | 22                         |
| Boilers, Water Heaters, Steam, & Hot-water Distribution Plumbing Fixtures and Equipment   | 0                          | 19                         |
| Fire and Safety Systems & Utility Controls  | 0                          | 22                         |
| Conveyances   | 0                          | 5                          |
| Preventive Maintenance (PM) Plan  | 0                          | 0                          |
| Preventive Maintenance (PM) Plan  Computerized Maint. Mgmt. System (incl. Equip. Data)  Pest Management  Control of North (South Control of North Control of North (South Control of North Control | 0                          | 0                          |
| Pest Management   | 0                          | 1                          |
| Custodial Scope of Work (SoW)   | 0                          | 0                          |
| Total   | 4                          | 306                        |

# Overall Rating vs Adjusted Building Age



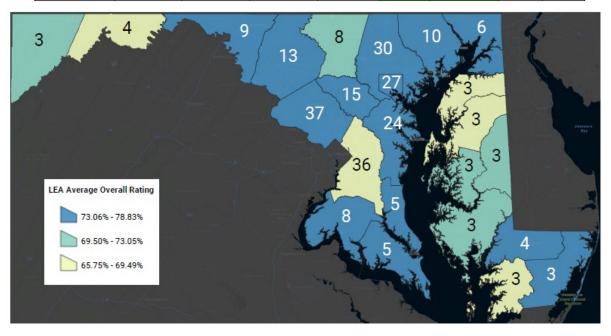
#### **PRINCE GEORGE'S COUNTY**

FY 2021 Results: Recommendations

- Regularly scheduled inspections of parking lots and walkways are recommended to catch and
  repair issues before they worsen. Inspection results should be tracked using the computerized
  maintenance management system (CMMS) with work orders to ensure that issues are corrected.
- Preventive and corrective maintenance for the HVAC systems should be tracked using work
  orders and CMMS. Regularly scheduled preventive maintenance checks will help to keep
  equipment running and in optimal condition. Assets should be assigned unique identifiers that
  are tied to the preventive maintenance (PM) checks to ensure that all assets are being serviced.
- Playground and field inspections should be conducted on a regular basis. Issues that are identified during the inspections should be tracked using the CMMS.
- Emergency lights should be tested on a regular basis according to the manufacturer's
  recommendations for periodicity and length of test. Any lights that do not pass the regular
  inspection should be repaired or replaced and tracked with a CMMS work order. Work orders
  could help to identify lights that have recurring failures and might need to be replaced.

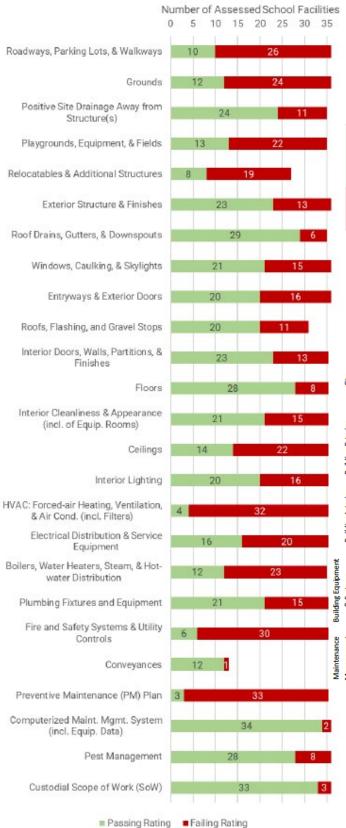
# Appendix B: FY 2022 Maintenance Effectiveness Assessment 14

|                 | LEA Characteristics in FY22 |             |                         | FY22 Maintenance Assessment Results |         |              |           |       |
|-----------------|-----------------------------|-------------|-------------------------|-------------------------------------|---------|--------------|-----------|-------|
|                 | Total # of<br>School        |             | Average<br>Adjusted Age |                                     |         |              | # of Defi |       |
| LEA             | Facilities                  | Footage     | of Schools              | Assessed                            | LEA Ave | erage Rating | Major     | Minor |
| TOTALS          | 1370                        | 141,714,338 | 31                      | 265                                 | 73.06%  | Adequate     | 4         | 685   |
| Allegany        | 22                          | 1,749,398   | 35.3                    | 4                                   | 65.75%  | Not Adequate | 0         | 26    |
| Anne Arundel    | 121                         | 13,883,724  | 29.1                    | 24                                  | 75.33%  | Adequate     | 0         | 37    |
| Baltimore City  | 141                         | 16,251,586  | 37.0                    | 27                                  | 73.94%  | Adequate     | 2         | 82    |
| Baltimore Co    | 165                         | 16,791,691  | 32.8                    | 30                                  | 73.18%  | Adequate     | 0         | 48    |
| Calvert         | 25                          | 2,456,795   | 24.2                    | 5                                   | 76.72%  | Adequate     | 0         | 1     |
| Caroline        | 10                          | 877,773     | 22.5                    | 3                                   | 71.66%  | Adequate     | 0         | 7     |
| Carroll         | 40                          | 4,176,741   | 31.3                    | 8                                   | 72.10%  | Adequate     | 0         | 27    |
| Cecil           | 29                          | 2,242,569   | 30.0                    | 6                                   | 75.85%  | Adequate     | 0         | 7     |
| Charles         | 39                          | 4,233,893   | 28.6                    | 8                                   | 75.92%  | Adequate     | 0         | 7     |
| Dorchester      | 14                          | 970,840     | 30.3                    | 3                                   | 70.54%  | Adequate     | 0         | 7     |
| Frederick       | 68                          | 6,811,025   | 27.2                    | 13                                  | 78.19%  | Adequate     | 0         | 28    |
| Garrett         | 13                          | 741,671     | 34.0                    | 3                                   | 71.70%  | Adequate     | 0         | 8     |
| Harford         | 52                          | 6,054,298   | 30.9                    | 10                                  | 76.41%  | Adequate     | 0         | 16    |
| Howard          | 76                          | 8,250,880   | 20.6                    | 15                                  | 77.11%  | Adequate     | 0         | 27    |
| Kent            | 5                           | 440,226     | 43.8                    | 3                                   | 69.47%  | Not Adequate | 0         | 5     |
| Montgomery      | 210                         | 25,147,251  | 25.1                    | 37                                  | 73.66%  | Adequate     | 0         | 65    |
| Prince George's | 197                         | 18,652,099  | 39.0                    | 36                                  | 66.12%  | Not Adequate | 2         | 217   |
| Queen Anne's    | 14                          | 1,302,658   | 21.0                    | 3                                   | 67.28%  | Not Adequate | 0         | 14    |
| St. Mary's      | 27                          | 2,300,101   | 25.6                    | 5                                   | 73.94%  | Adequate     | 0         | 8     |
| Somerset        | 10                          | 671,356     | 21.3                    | 3                                   | 68.14%  | Not Adequate | 0         | 14    |
| Talbot          | 8                           | 700,971     | 17.1                    | 3                                   | 70.83%  | Adequate     | 0         | 10    |
| Washington      | 46                          | 3,476,622   | 34.8                    | 9                                   | 73.25%  | Adequate     | 0         | 16    |
| Wicomico        | 24                          | 2,244,318   | 29.4                    | 4                                   | 78.83%  | Adequate     | 0         | 1     |
| Worcester       | 14                          | 1,285,852   | 26.6                    | 3                                   | 73.17%  | Adequate     | 0         | 7     |



<sup>&</sup>lt;sup>14</sup> FY 2022 Maintenance Effectiveness Assessment.

#### FY22 Passing vs Failing Rating per Category

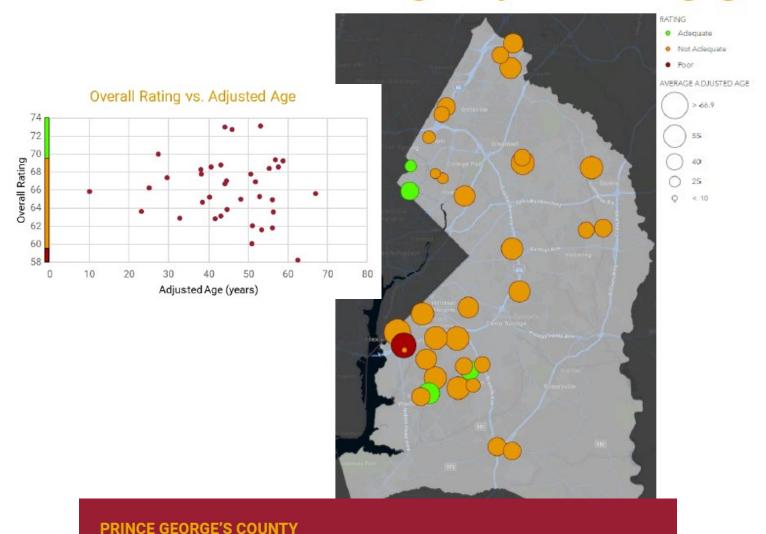


## FY 2022 Overall Rating Results by School Type

|              | Special<br>Education | Elementary | Elementary/<br>Middle | PreK-8 | Middle | High | Science |    |
|--------------|----------------------|------------|-----------------------|--------|--------|------|---------|----|
| Superior     |                      |            |                       |        |        |      |         |    |
| Good         |                      |            |                       |        |        |      |         |    |
| Adequate     |                      | 3          |                       |        | 1      |      |         | 4  |
| Not Adequate | 3                    | 13         | 2                     | 3      | 2      | 7    | 1       | 31 |
| Poor         |                      |            |                       | 1      |        |      |         | 1  |
| Totals       | 3                    | 16         | 2                     | 4      | 3      | 7    | 1       | 36 |

|                                 | Category   | # of Major<br>Deficiencies | # of Minor<br>Deficiencies |
|---------------------------------|--|----------------------------|----------------------------|
|                                 | Roadways, Parking Lots, & Walkways                                 | 0                          | 20                         |
|                                 | Grounds  | 0                          | 14                         |
| Site                            | Positive Site Drainage Away from Structure(s)                      | 0                          | 3                          |
|                                 | Playgrounds, Equipment, & Fields                                   | 1                          | 12                         |
| _                               | Relocatables & Additional Structures                               | 0                          | 11                         |
| 5                               | Exterior Structure & Finishes                                      | 0                          | 5                          |
| Building Exterior               | Roof Drains, Gutters, & Downspouts                                 | 0                          | 3                          |
| <u>я</u>                        | Windows, Caulking, & Skylights                                     | 0                          | 4                          |
| ig                              | Entryways & Exterior Doors   | 0                          | 5                          |
| - B                             | Roofs, Flashing, and Gravel Stops                                  | 0                          | 4                          |
| <u> </u>                        | Interior Doors, Walls, Partitions, & Finishes                      | 0                          | 11                         |
| Building Interior               | Floors   | 0                          | 7                          |
| ᇣ                               | Interior Cleanliness & Appearance (incl. of Equip. Rooms)          | 0                          | 11                         |
| į                               | Ceilings   | 0                          | 9                          |
| <u> </u>                        | Interior Lighting  | 0                          | 14                         |
| ¥                               | HVAC: Forced-air Heating, Ventilation, & Air Cond. (incl. Filters) | 0                          | 15                         |
| Building Equipment<br>& Systems | Electrical Distribution & Service Equipment                        | 1                          | 15                         |
| de de                           | Boilers, Water Heaters, Steam, & Hot-water Distribution            | 0                          | <b>1</b> 5                 |
| ing Equipn<br>& Systems         | Plumbing Fixtures and Equipment                                    | 0                          | 14                         |
| ₩.                              | Fire and Safety Systems & Utility Controls                         | 0                          | <b>2</b> 5                 |
| <u> </u>                        | Conveyances  | 0                          | 0                          |
| e t                             | Preventive Maintenance (PM) Plan                                   | 0                          | 0                          |
| Maintenance<br>Management       | Computerized Maint. Mgmt. System (incl. Equip. Data)               | 0                          | 0                          |
| Maintenance<br>Management       | Pest Management  | 0                          | 0                          |
| Σ Ξ                             | Custodial Scope of Work (SoW)                                      | 0                          | 0                          |
| _                               | Total  | 2                          | 217                        |

# Overall Rating vs Adjusted Building Age



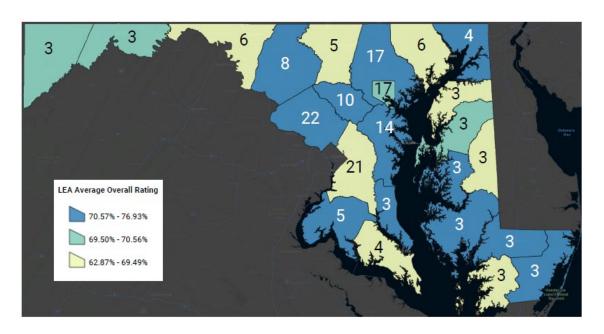
The PM schedule should be expanded for each facility to encompass all assets, systems, and

FY 2022 Results: Recommendations

- structural elements listed in the CMP.
- PM tasks identified in the CMP and the custodial checklists should have auto-populating PM work orders created in the CMMS.
- Additional training or PM checks are recommended to prevent or quickly remediate issues that
  may cause health or safety concerns, such as damaged playground equipment, non-functional
  HVAC equipment, and issues with fire and safety systems.
- Playground inspections should be added to the PM schedule. Deficiencies noted during the PM checks should be entered and tracked using the CMMS.
- All equipment and building parts should be tagged with an asset tag. PM work orders should
  generate automatically in the CMMS for each asset tag rather than for a group of asset tags so
  PM and follow-up corrective work orders can be more easily tracked for individual equipment.

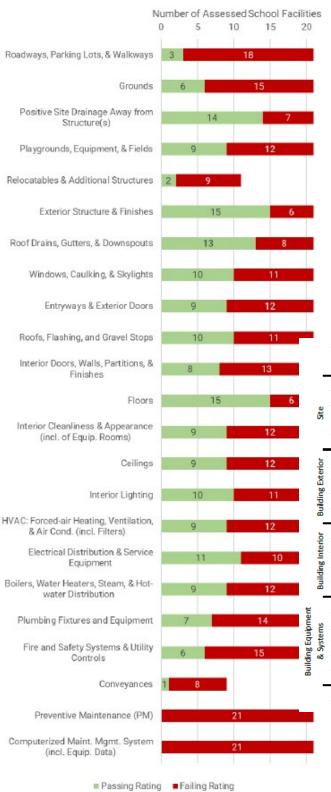
# <u>Appendix C: FY 2023 Maintenance Effectiveness Assessment</u> 15

|                 | LEA Characteristics in FY23 FY23 Maintenance Assessment |              |                         | t Results    |         |              |          |           |
|-----------------|---|--------------|-------------------------|--------------|---------|--------------|----------|-----------|
|                 | Total # of<br>School                                    | Total Square | Average<br>Adjusted Age | # of Schools |         |              | # of Def | iciencies |
| LEA             | Facilities  | Footage      | of Schools              | Assessed     | LEA Ave | erage Rating | Major    | Minor     |
| TOTALS          | 1370  | 142,108,765  | 31                      | 172          | 70.57%  | Adequate     | 2        | 336       |
| Allegany        | 22  | 1,749,398    | 36.3                    | 3            | 70.30%  | Adequate     | 0        | 6         |
| Anne Arundel    | 121   | 13,902,130   | 30.1                    | 14           | 75.51%  | Adequate     | 0        | 3         |
| Baltimore City  | 140   | 16,304,883   | 37.8                    | 17           | 69.57%  | Adequate     | 2        | 40        |
| Baltimore Co    | 166   | 16,900,318   | 33.5                    | 17           | 74.03%  | Adequate     | 0        | 4         |
| Calvert         | 25  | 2,456,795    | 25.2                    | 3            | 72.22%  | Adequate     | 0        | 1         |
| Caroline        | 10  | 877,773      | 23.5                    | 3            | 67.68%  | Not Adequate | 0        | 6         |
| Carroll         | 40  | 4,266,203    | 31.7                    | 5            | 67.13%  | Not Adequate | 0        | 13        |
| Cecil           | 29  | 2,267,203    | 29.4                    | 4            | 73.91%  | Adequate     | 0        | 2         |
| Charles         | 39  | 4,235,048    | 29.6                    | 5            | 71.35%  | Adequate     | 0        | 5         |
| Dorchester      | 14  | 970,840      | 31.3                    | 3            | 71.90%  | Adequate     | 0        | 3         |
| Frederick       | 67  | 6,784,025    | 28.1                    | 8            | 76.93%  | Adequate     | 0        | 7         |
| Garrett         | 13  | 741,671      | 35.0                    | 3            | 70.40%  | Adequate     | 0        | 7         |
| Harford         | 52  | 6,054,298    | 31.9                    | 6            | 67.42%  | Not Adequate | 0        | 17        |
| Howard          | 76  | 8,250,880    | 21.6                    | 10           | 72.20%  | Adequate     | 0        | 15        |
| Kent            | 5   | 441,409      | 44.7                    | 3            | 68.74%  | Not Adequate | 0        | 7         |
| Montgomery      | 210   | 25,147,251   | 25.9                    | 22           | 72.42%  | Adequate     | 0        | 13        |
| Prince George's | 198   | 18,712,667   | 39.7                    | 21           | 63.70%  | Not Adequate | 0        | 130       |
| Queen Anne's    | 14  | 1,302,658    | 22.0                    | 3            | 70.49%  | Adequate     | 0        | 3         |
| St. Mary's      | 27  | 2,300,101    | 26.6                    | 4            | 63.91%  | Not Adequate | 0        | 26        |
| Somerset        | 10  | 671,356      | 22.3                    | 3            | 62.87%  | Not Adequate | 0        | 13        |
| Talbot          | 8   | 700,971      | 18.1                    | 3            | 71.96%  | Adequate     | 0        | 0         |
| Washington      | 46  | 3,476,622    | 35.8                    | 6            | 68.03%  | Not Adequate | 0        | 13        |
| Wicomico        | 24  | 2,283,618    | 28.7                    | 3            | 73.76%  | Adequate     | 0        | 0         |
| Worcester       | 14  | 1,310,647    | 27.0                    | 3            | 71.28%  | Adequate     | 0        | 2         |



<sup>&</sup>lt;sup>15</sup> FY 2023 Maintenance Effectiveness Assessment.

#### FY23 Passing vs Failing Rating per Category

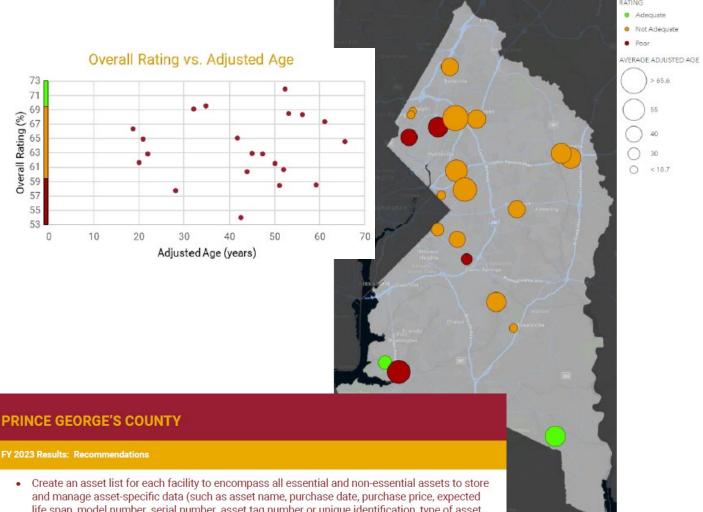


## FY 2023 Overall Rating Results by School Type

|              | Environmental<br>Education | Elementary | Elementary/<br>Middle | Middle | High |    |
|--------------|----------------------------|------------|-----------------------|--------|------|----|
| Superior     |                            |            |                       |        |      |    |
| Good         |                            |            |                       |        |      |    |
| Adequate     | 1                          | 1          |                       |        |      | 2  |
| Not Adequate |                            | 9          | 1                     | 4      | 1    | 15 |
| Poor         |                            | 3          |                       |        | 1    | 4  |
| Totals       | 1                          | 13         | 1                     | 4      | 2    | 21 |

|                   | Category   | # of Major<br>Deficiencies | # of Minor<br>Deficiencies |
|-------------------|--|----------------------------|----------------------------|
| _                 | Roadways, Parking Lots, & Walkways                                 | 0                          | 10                         |
|                   | Grounds  | 0                          | 9                          |
| Site              | Positive Site Drainage Away from Structure(s)                      | 0                          | 2                          |
|                   | Playgrounds, Equipment, & Fields                                   | 0                          | 10                         |
|                   | Relocatables & Additional Structures                               | 0                          | 7                          |
| <u></u>           | Exterior Structure & Finishes                                      | 0                          | 4                          |
| Building Exterior | Roof Drains, Gutters, & Downspouts                                 | 0                          | 2                          |
| Θ.                | Windows, Caulking, & Skylights                                     | 0                          | 3                          |
| ig                | Entryways & Exterior Doors   | 0                          | 4                          |
| B                 | Roofs, Flashing, and Gravel Stops                                  | 0                          | 1                          |
| Έ_                | Interior Doors, Walls, Partitions, & Finishes                      | 0                          | 6                          |
| Building Interior | Floors   | 0                          | 5                          |
| F .               | Interior Cleanliness & Appearance (incl. of Equip. Rooms)          | 0                          | 10                         |
| į                 | Ceilings   | 0                          | 5                          |
| <u>ಹ_</u>         | Interior Lighting  | 0                          | 5                          |
|                   | HVAC: Forced-air Heating, Ventilation, & Air Cond. (incl. Filters) | 0                          | 7                          |
| S                 | Electrical Distribution & Service Equipment                        | 0                          | 6                          |
| & Systems         | Boilers, Water Heaters, Steam, & Hot-water Distribution            | 0                          | 10                         |
| Sys               | Plumbing Fixtures and Equipment                                    | 0                          | 7                          |
| ∞                 | Fire and Safety Systems & Utility Controls                         | 0                          | 10                         |
| _                 | Conveyances  | 0                          | 7                          |
|                   | Total  | 0                          | 130                        |

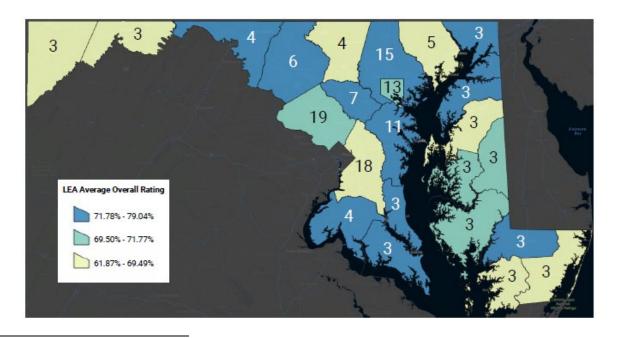
## Overall Rating vs Adjusted Building Age



- life span, model number, serial number, asset tag number or unique identification, type of asset, location, and any other relevant details), and use the CMMS to track the maintenance and repair history as well as performance of each asset over time.
- All essential assets should have auto-populating PM work orders created in the CMMS. These work orders should be scheduled to ensure the activities occur at industry-standard frequencies and within a reasonable timeframe of the expected completion.
- Roadways and parking lots should be added to the PM schedule. Consider applying sealants to asphalt parking lots and roadways to slow deterioration until such assets can be resurfaced. Safety issues should be reported and addressed immediately.
- Create and implement an integrated pest management (IPM) plan. Pest management PM activities should have auto-populating PM work orders created in the CMMS and scheduled to ensure the activities occur at industry-standard frequencies and within a reasonable timeframe of the expected completion. The custodial duties outlined in the IPM plan should also be reflected in the custodial scope of work.
- All fire and safety systems and components should have PM activities scheduled at the appropriate frequencies and tracked using the CMMS. Depending on what is installed at each facility, the PM schedule may include PM activities for fire extinguishers, battery-operated emergency lights and exit features, fire doors, kitchen hood suppression, smoke evacuation dampers, and stairwell pressurization fans.
- DLLR-regulated equipment inspections are a requirement and need to be scheduled and completed at the appropriate frequency. Inspections should be tracked and documented using the CMMS, and the inspection documentation should be available on site.

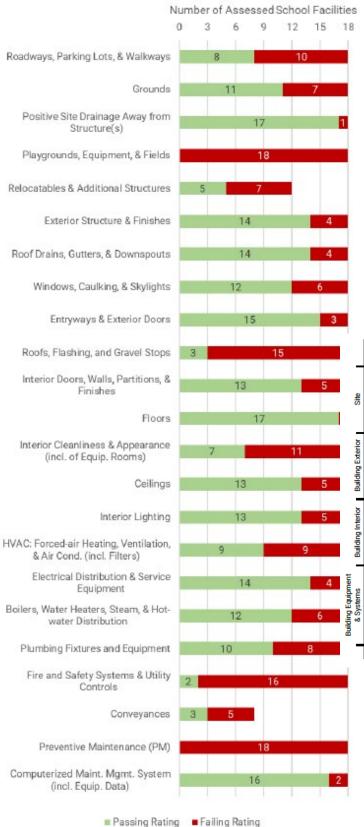
# Appendix D: FY 2024 Maintenance Effectiveness Assessment 16

| 1                     | LEA Characteristics in FY24 |              |                         | FY24 Maintenance Assessment Results |        |              |          |           |
|-----------------------|-----------------------------|--------------|-------------------------|-------------------------------------|--------|--------------|----------|-----------|
|                       | Total # of<br>School        | Total Square | Average<br>Adjusted Age | # of Schools                        |        | ,            | # of Def | iciencies |
| LEA                   | Facilities                  | Footage      | of Schools              | Assessed                            | LEA Av | erage Rating | Major    | Minor     |
| TOTALS                | 1362                        | 142,053,436  | 31                      | 145                                 | 71.77% | Adequate     | 1        | 274       |
| Allegany              | 22                          | 1,749,398    | 37.3                    | 3                                   | 68.20% | Not Adequate | 0        | 13        |
| Anne Arundel          | 120                         | 13,827,264   | 30.0                    | 11                                  | 74.99% | Adequate     | 0        | 14        |
| <b>Baltimore City</b> | 130                         | 15,122,778   | 37.2                    | 13                                  | 71.66% | Adequate     | 0        | 13        |
| Baltimore Co          | 167                         | 16,884,863   | 34.2                    | <b>1</b> 5                          | 76.04% | Adequate     | 0        | 13        |
| Calvert               | 25                          | 2,475,898    | 25.0                    | 3                                   | 73.69% | Adequate     | 0        | 5         |
| Caroline              | 10                          | 877,773      | 24.5                    | 3                                   | 70.68% | Adequate     | 0        | 3         |
| Carroll               | 40                          | 4,272,046    | 31.3                    | 4                                   | 68.51% | Not Adequate | 0        | 9         |
| Cecil                 | 29                          | 2,267,203    | 30.4                    | 3                                   | 74.43% | Adequate     | 0        | 0         |
| Charles               | 39                          | 4,179,228    | 30.5                    | 4                                   | 75.24% | Adequate     | 0        | 2         |
| Dorchester            | 14                          | 970,840      | 32.3                    | 3                                   | 69.74% | Adequate     | 0        | 5         |
| Frederick             | 68                          | 6,923,758    | 28.0                    | 6                                   | 78.31% | Adequate     | 0        | 1         |
| Garrett               | 13                          | 741,671      | 36.0                    | 3                                   | 65.75% | Not Adequate | 0        | 16        |
| Harford               | 53                          | 5,991,468    | 32.6                    | 5                                   | 67.62% | Not Adequate | 0        | 22        |
| Howard                | 76                          | 8,527,365    | 20.4                    | 7                                   | 73.08% | Adequate     | 0        | 13        |
| Kent                  | 5                           | 441,409      | 45.7                    | 3                                   | 72.37% | Adequate     | 0        | 6         |
| Montgomery            | 212                         | 25,832,149   | 25.6                    | 19                                  | 70.77% | Adequate     | 0        | 25        |
| Prince George's       | 196                         | 18,922,353   | 39.8                    | 18                                  | 67.54% | Not Adequate | 1        | 64        |
| Queen Anne's          | 14                          | 1,302,658    | 22.3                    | 3                                   | 68.91% | Not Adequate | 0        | 5         |
| St. Mary's            | 27                          | 2,300,101    | 27.1                    | 3                                   | 77.15% | Adequate     | 0        | 3         |
| Somerset              | 10                          | 671,356      | 23.3                    | 3                                   | 61.87% | Not Adequate | 0        | 23        |
| Talbot                | 8                           | 700,971      | 19.1                    | 3                                   | 70.95% | Adequate     | 0        | 3         |
| Washington            | 46                          | 3,476,621    | 36.8                    | 4                                   | 74.63% | Adequate     | 0        | 2         |
| Wicomico              | 24                          | 2,283,618    | 29.7                    | 3                                   | 79.04% | Adequate     | 0        | 0         |
| Worcester             | 14                          | 1,310,647    | 28.0                    | 3                                   | 66.14% | Not Adequate | 0        | 14        |



<sup>&</sup>lt;sup>16</sup> FY 2024 Maintenance Effectiveness Assessment.

#### FY24 Passing vs Failing Rating per Category

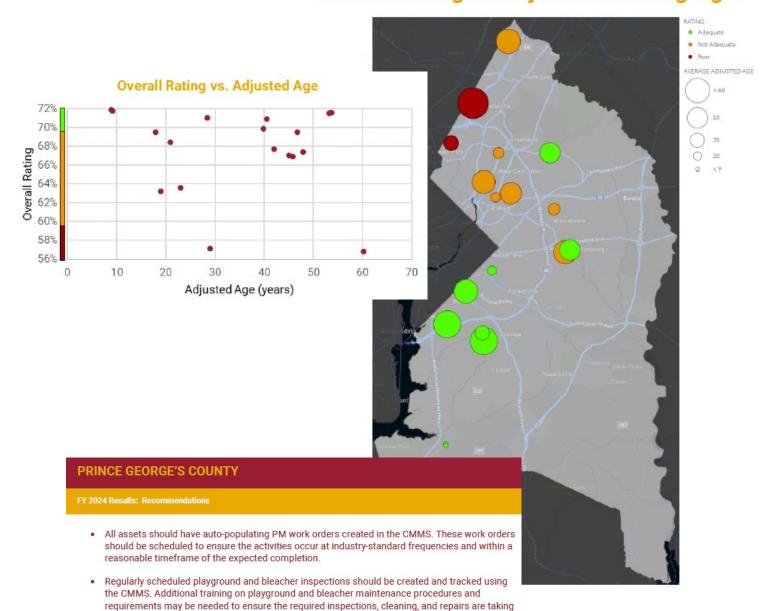


## FY 2024 Overall Rating Results by School Type

|              | Elementary | PreK-8 | Middle | High |    |
|--------------|------------|--------|--------|------|----|
| Superior     |            |        |        |      |    |
| Good         |            |        |        |      |    |
| Adequate     | 6          | 2      |        | 1    | 9  |
| Not Adequate | 5          |        |        | 2    | 7  |
| Poor         | 1          |        |        | 1    | 2  |
| Totals       | 12         | 2      |        | 4    | 18 |

|                                 | Category   | # of Major<br>Deficiencies | # of Minor<br>Deficiencies |
|---------------------------------|--|----------------------------|----------------------------|
|                                 | Roadways, Parking Lots, & Walkways                                 | 0                          | 5                          |
|                                 | Grounds  | 0                          | 3                          |
| Site                            | Positive Site Drainage Away from Structure(s)                      | 0                          | 0                          |
|                                 | Playgrounds, Equipment, & Fields                                   | 1                          | 4                          |
|                                 | Relocatables & Additional Structures                               | 0                          | 4                          |
| ō                               | Exterior Structure & Finishes                                      | 0                          | 0                          |
| Building Exterior               | Roof Drains, Gutters, & Downspouts                                 | 0                          | 2                          |
| Jg E                            | Windows, Caulking, & Skylights                                     | 0                          | 2                          |
| ildir                           | Entryways & Exterior Doors   | 0                          | 1                          |
| ĕ                               | Roofs, Flashing, and Gravel Stops                                  | 0                          | 1                          |
| b                               | Interior Doors, Walls, Partitions, & Finishes                      | 0                          | 4                          |
| Building Interior               | Floors   | 0                          | 0                          |
| ng In                           | Interior Cleanliness & Appearance (incl. of Equip. Rooms)          | 0                          | 5                          |
| ijg                             | Ceilings   | 0                          | 3                          |
| ā                               | Interior Lighting  | 0                          | 5                          |
| = _                             | HVAC: Forced-air Heating, Ventilation, & Air Cond. (incl. Filters) | 0                          | 2                          |
| s                               | Electrical Distribution & Service Equipment                        | 0                          | 4                          |
| de de la                        | Boilers, Water Heaters, Steam, & Hot-water Distribution            | 0                          | 3                          |
| Sys                             | Plumbing Fixtures and Equipment                                    | 0                          | 5                          |
| Building Equipment<br>& Systems | Fire and Safety Systems & Utility Controls                         | 0                          | 8                          |
| <u> </u>                        | Conveyances  | 0                          | 3                          |
|                                 | Total  | 1                          | 64                         |

# Overall Rating vs Adjusted Building Age



Create auto-populating PM work orders in the CMMS for all required tests and inspections of fire
and life safety systems, DLLR-regulated assets, roofs, bleachers, and grandstands. These should
include the asset data, due date or expiration of the current certificate, and the inspecting party.

place. Safety issues should be reported and addressed immediately.

Work orders should populate sufficiently in advance for all scheduling to occur.

- All fire and safety systems should have PM activities scheduled at the appropriate frequencies
  and tracked using the CMMS. Depending on what is installed at each facility, the PM schedule
  may include PM activities for fire extinguishers, battery-operated emergency lights and exit
  features, fire doors, kitchen hood suppression, smoke evacuation dampers, and stairwell
  pressurization fans. A facility asset list or marked floor plan will help ensure that all fire
  extinguishers, emergency lights, and other assets are inspected and serviced appropriately
  at each facility.
- Corrective work orders should be created in the CMMS immediately following any inspection
  where deficiencies are identified. This will help identify trends and common issues in order to
  better proactively maintain assets.
- A field should be created in the CMMS to track the days each work order has aged to help
  identify causes of possible bottlenecks and streamline workflow processes. Fields should also
  be set up to track labor hours and costs to assist in establishing predictable cost trends and
  support more efficient resource management.