

APPENDIX A

Report on Physical and Functional Assessment of Schools Constructed Prior to 1980



March 2008

School Facilities

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The following individuals assessed or coordinated assessments of school buildings:

| <u>Name</u> | <u>Title</u> |
|-------------------|--|
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| Margaret Pfaff | Director of Curriculum, Instruction and Staff Development |
| Dana Falls | Director of Student Services |
| James Doolan | Director of Transportation Services |
| Karen Ganjon | Director of Minority Achievement and Intervention Programs |
| Gary Davis | Chief Information Officer |
| Larry Faries | Coordinator of School Security |
| Eulalia Muschik | Supervisor of Food Services |
| Douglas Gross | Supervisor of Operations |
| James Parker | Supervisor of Maintenance |
| Jeff Rogers | Supervisor of Fine Arts |
| Cindy Eckenrode | Supervisor of Elementary Education |
| Cindy McCabe | Supervisor of Elementary Education |
| Anna Varakin | Supervisor of Elementary Education |
| Donn Hicks | Supervisor of Elementary Education |
| Celeste Saxton | Supervisor of Social Studies |
| Marjorie Lohnes | Supervisor of Career and Technology Education |
| Kent Creamer | Supervisor of Mathematics |
| Brad Yohe | Supervisor of Science |
| Jim Rodriguez | Supervisor of Physical Education/Athletics |
| Linda Kephart | Supervisor of Health and Elementary Physical Education |
| Jan Jayman | Supervisor of English and Modern/Classical Languages |
| Brian Wienholt | Supervisor of Middle School Reading and Language Arts |
| Irene Hildebrandt | Supervisor of Media |
| Mike Gray | Assistant Supervisor of Career and Technology Education |

Introduction

The desire to develop a process for prioritization of modernization projects has been a topic of discussion for some years with the Board of Education of Carroll County Public Schools. In March 2006, funds were made available to perform a physical assessment of all schools and utilize the data in a web based software application that, in addition to numerous other functions, provides a method of comparing and ranking modernization needs.

In March, 2007 the Board of Education indicated a desire to understand how the functional aspects of the facilities could be combined with the physical assessment to provide a comprehensive picture of a building's condition. The intended outcome is to provide as complete a picture of the condition of a building and compare that condition with the other buildings in the system inventory.

Definition

An appropriate definition of modernization is “the design, construction and equipping process through which an aging school facility is brought up to current educational standards and through which its systems are renewed and updated to meet school system, county, state and federal codes and requirements. Modernizations may be accompanied by additions or redesign of existing spaces to meet educational program requirements.”

It must be understood that building condition is dynamic in nature and reflect many years of renovations, additions, space creation and alteration, equipment and systems replacement upgrades and maintenance projects. Both Physical and functional assessments must take this into account as data is gathered.

Study Methodology

Physical Assessment

As part of a strategic planning initiative, in June 2006, a contract to perform a physical assessment of forty one CCPS facilities was awarded to EMG of Hunt Valley. The scope provided to EMG included the following as it pertains to modernization prioritization:

- Identify the extent and severity of the deferred maintenance liability.
- Develop correction methods and estimated costs for deficient conditions.
- Prioritize and schedule projects to efficiently and economically dispatch corrections of singular or multiple requirements.

- Obtain a Facility Condition Index (FCI) that will illustrate the relative condition of facilities and infrastructure in the portfolio.
- Identify what is necessary to adapt the selected facilities and infrastructure to meet the planned future requirements of the institution, the requirements of today's standards and codes, and the needs of changing technology as it impacts space (i.e., plant adaptation).

The facility conditions survey included the following property elements:

- Exterior Systems – roofs, walls, window systems, doors, canopies
- Interior Construction – walls, doors, flooring, visible structural components
- Interior Finishes: Flooring, ceiling, wall finishes
- Health/Fire/Life Safety systems
- Accessibility issues
- Heating, Ventilation and Air Conditioning
- Plumbing
- Electrical and Service Distribution
- Fire Suppression
- Special Electrical Systems, Emergency Power, Telecommunications
- Security and Surveillance Systems
- Lighting Systems
- Special Construction
- Vertical Transportation
- Infrastructure/site utilities – chilled water, electric distribution systems, sewer, storm drainage, sidewalks, roads, plazas, landscaping
- Site amenities – site access from public thoroughfares, traffic patterns and signage, playfields, playgrounds

Calculation of the Facilities Condition Index (FCI) is defined as the value of the identified deficient items in the school divided by the replacement cost of the school; the larger the FCI, the greater the need for modernization. For the purposes of this report the inverse of the fractional FCI is multiplied by 1000 maximum points for each school to provide the physical assessment points to be combined with the functional points.

Functional Assessment – Instructional and Administrative Staff

In March 2007 the Board of Education directed that a functional assessment of the school system be conducted. The purpose was to combine the physical assessment with the results of the functional assessment to obtain a clearer picture of the overall condition of the system facilities. The criteria utilized for the functional assessment was developed after reviewing the criteria utilized in the *Guide for School Facility Appraisal, 1998 Edition, The Council of Educational Facilities Planners, Int'l*, a similar assessment conducted by Frederick County Public Schools in 2000 and the criteria the State of Maryland Public School Construction Program used to conduct a Minimum Educational

Adequacy survey in 2003. These documents may be referenced in appendix A, B & C respectively.

The criteria utilized for this study is attached as Appendix D. Each school type was assigned a theoretical maximum value of 1000 points distributed over the assessed areas. Weighted values were provided after discussion with the instructional leaders.

The survey was conducted by the instructional area supervisors except for areas it was determined input from the administrative staff was more appropriate. A survey tool called CheckBox was assembled by Technology Services staff and the survey results were assigned values ranging from zero as the lowest score and five the highest. The results from each criteria group were averaged and that average determined the actual points assigned an area. The total points were then combined with the physical assessment points to achieve the modernization prioritization.

It was determined that schools constructed or modernized after 1980 would not be assessed as a part of this evaluation so the schools under consideration could receive the appropriate amount of attention to provide as accurate an assessment as possible. Since the Career & Technology Center recently had a complete facilities assessment performed in 2006 it was determined that it would not be a part of this study.

The schools assessed are noted in Table 1.

Table 1 – Schools Assessed

| Name | Type | Year of Original Construction or Modernization | Size |
|--------------------|--------|--|---------|
| Charles Carroll | Elem | 1929 | 43,700 |
| Freedom | Elem | 1955 | 51,232 |
| Westminster West | Middle | 1958 | 135,733 |
| Mt. Airy | Middle | 1958 | 75,800 |
| William Winchester | Elem | 1962 | 54,947 |
| South Carroll | High | 1967 | 269,870 |
| Westminster | High | 1970 | 337,050 |
| Eldersburg | Elem | 1970 | 72,313 |
| Westminster East | Middle | M1975 | 120,400 |
| Westminster | Elem | 1976 | 74,637 |
| Robert Moton | Elem | 1976 | 75,200 |
| Northwest | Middle | 1976 | 113,600 |
| North Carroll | High | 1976 | 233,400 |
| Carrolltowne | Elem | 1976 | 87,654 |

Findings

The results of the assessments are shown in the attached tables. Table 2 provides the total scores by school for the physical and functional assessments as well as the combined score. Tables 3, 4 & 5 provide the area functional assessment scores by building type. The Replacement Reserve Reports that detail the deficient items at each school that make up the FCI are located in Appendix E.

Based on the total scores, Charles Carroll Elementary School is the school most in need of modernization. This is not a surprise in that Charles Carroll is the oldest school in the county and has many deficiencies associated with resource space and site conditions.

William Winchester Elementary received the second lowest behind Charles Carroll. The low functional assessment score for William Winchester is due primarily to the fact that it was originally constructed as an annex and not designed to operate as a stand alone facility.

The close scoring of the physical assessment was not a surprise as the overall condition of CCPS facilities has received consistently high ranking and praise whenever evaluations have been conducted.

Table 2 – Physical, Functional and Total Assessment Scores

| School | Physical Assessment Score Max. 1000 | Functional Assessment Score Max. 1000 | Total Score Max. 2000 |
|--------------------|--|--|--------------------------|
| Charles Carroll | 958 | 462 | 1420 |
| William Winchester | 964 | 495 | 1459 |
| Mt. Airy MS | 906 | 569 | 1475 |
| Westminster East | 952 | 579 | 1531 |
| Westminster West | 979 | 578 | 1557 |
| Freedom | 975 | 597 | 1572 |
| Westminster HS | 940 | 654 | 1594 |
| South Carroll | 980 | 630 | 1610 |
| Robert Moton | 995 | 634 | 1629 |
| Northwest | 969 | 694 | 1663 |
| Eldersburg | 974 | 699 | 1673 |
| Westminster ES | 971 | 735 | 1706 |
| Carrolltowne | 987 | 738 | 1725 |
| North Carroll | 988 | 739 | 1727 |

Table 3 – Elementary Assessment Scores by Area

School Summary

| School | General Area Score | A&SS Score ¹ | General Classroom Score | PreK/K | Visual Arts | Music | Media Center | Phys Ed | Food Services |
|--------------------|--------------------|-------------------------|-------------------------|--------|-------------|-------|--------------|---------|---------------|
| Carrolltowne | 64 | 122 | 135 | 73 | 57 | 50 | 81 | 100 | 56 |
| Robert Moton | 48 | 84 | 120 | 59 | 57 | 57 | 64 | 104 | 42 |
| Westminster | 50 | 141 | 126 | 87 | 46 | 62 | 64 | 104 | 56 |
| William Winchester | 42 | 34 | 132 | 71 | 32 | 41 | 43 | 71 | 28 |
| Freedom | 48 | 38 | 129 | 59 | 37 | 43 | 110 | 78 | 56 |
| Charles Carroll | 39 | 38 | 111 | 60 | 57 | 2 | 52 | 74 | 28 |
| Eldersburg | 53 | 103 | 120 | 100 | 50 | 53 | 95 | 97 | 28 |
| Average | 49 | 80 | 125 | 73 | 48 | 44 | 73 | 90 | 42 |
| Maximum Score | 70 | 190 | 150 | 100 | 80 | 80 | 130 | 130 | 70 |
| Avg % | 70% | 42% | 83% | 73% | 60% | 55% | 56% | 69% | 60% |

Overall Scores

| School | Overall Score | Total Possible | % of possible |
|--------------------|---------------|----------------|---------------|
| Carrolltowne | 738 | 1000 | 74% |
| Robert Moton | 634 | 1000 | 63% |
| Westminster | 735 | 1000 | 74% |
| William Winchester | 495 | 1000 | 49% |
| Freedom | 597 | 1000 | 60% |
| Charles Carroll | 462 | 1000 | 46% |
| Eldersburg | 699 | 1000 | 70% |

- Administrative and Support Services

Table 4 – Middle School Scores by Area

School Summary

| School | General Area | A&SS Score ¹ | General Classroom Score | Science | Visual Arts | Music | TAD ² | Media Center | Phys Ed | FCS&TE ³ | Food Services |
|-------------------|--------------|-------------------------|-------------------------|---------|-------------|-------|------------------|--------------|---------|---------------------|---------------|
| East Middle | 39 | 122 | 99 | 56 | 38 | 21 | 0 | 26 | 93 | 44 | 42 |
| Mount Airy Middle | 50 | 95 | 86 | 44 | 39 | 34 | 2 | 69 | 93 | 43 | 14 |
| Northwest Middle | 56 | 144 | 99 | 50 | 36 | 33 | 2 | 61 | 104 | 54 | 56 |
| West Middle | 48 | 49 | 107 | 36 | 41 | 31 | 2 | 104 | 100 | 18 | 42 |
| Average | 48 | 103 | 98 | 46 | 39 | 30 | 1 | 65 | 98 | 40 | 39 |
| Maximum Score | 70 | 190 | 130 | 60 | 60 | 60 | 40 | 130 | 130 | 60 | 70 |
| Avg % | 69% | 54% | 75% | 77% | 64% | 49% | 4% | 50% | 75% | 67% | 55% |

Overall Scores

| School | Overall Score | Total Possible | % of possible |
|-------------------|---------------|----------------|---------------|
| East Middle | 579 | 1000 | 58% |
| Mount Airy Middle | 569 | 1000 | 57% |
| Northwest Middle | 694 | 1000 | 69% |
| West Middle | 578 | 1000 | 58% |

1. Administrative and Support Services
2. Theater and Dance
3. Family and Consumer Sciences and Technology Education

Table 5 – High School Scores by Area

School Summary

| School | General Area | A&SS Score ¹ | General Classroom Score | Sci | Visual Arts | Music | TAD ² | Media Center | Phys Ed | F&C S ³ | Agri. Sci. ⁴ | Business Ed | Tech Ed | Food Serv. |
|--------------------|--------------|-------------------------|-------------------------|-----|-------------|-------|------------------|--------------|---------|--------------------|-------------------------|-------------|---------|------------|
| North Carroll High | 53 | 141 | 88 | 38 | 42 | 52 | 9 | 106 | 97 | 13 | 14 | 18 | 13 | 56 |
| South Carroll High | 56 | 103 | 70 | 50 | 36 | 27 | 2 | 97 | 93 | 8 | 7 | 15 | 11 | 56 |
| Westminster High | 50 | 144 | 79 | 48 | 44 | 37 | 14 | 38 | 97 | 11 | 11 | 15 | 10 | 56 |
| Average | 53 | 129 | 79 | 45 | 41 | 39 | 8 | 80 | 95 | 11 | 11 | 16 | 11 | 56 |
| Maximum Score | 70 | 190 | 110 | 60 | 60 | 60 | 40 | 130 | 130 | 20 | 20 | 20 | 20 | 70 |
| Avg % | 76% | 68% | 72% | 75% | 68% | 64% | 20% | 62% | 73% | 53% | 53% | 80% | 57% | 80% |

Overall Scores

| School | Overall Score | Total Possible | % of possible |
|--------------------|---------------|----------------|---------------|
| North Carroll High | 739 | 1000 | 74% |
| South Carroll High | 630 | 1000 | 63% |
| Westminster High | 654 | 1000 | 65% |

1. Administrative and Support Services
2. Theater and Dance
3. Family and Consumer Sciences
4. Agriscience

Next Steps

This study represents the first time that Carroll County Public School has taken on the task of evaluating the physical and functional aspects of schools. In the past, the age and physical aspects of each school dictated when a building was scheduled to be modernized. This study represents a large step forward in evaluating facilities in a comprehensive manner with the goal of attaining a more objective way of assessing older school facilities. In order to continue to improve this process, input is sought from the Board of Education, staff and the public.

As this study represents the first step in the evaluation and prioritization of modernization projects, it is recommended that this study begin by the Board of Education to consider what part capacity should play in modernization priority and how modernizations are to be prioritized with capacity projects. Based on projected lower enrollments over the next few years, an opportunity exists to address the highest priority modernization projects as represented by this study.

The assessment results will be utilized by the Facilities Department when developing the *2008-2017 Educational facilities Master Plan* and the *FY 2010-2016 Capital Improvement Plan*. Input from the Board of Education, staff and the public will be taken into consideration as the plans are developed.

Lastly, discussion needs to occur as to how this initial study is to be utilized in the development of future *Educational Facilities Master Plans*. For example the Facilities Condition Index (FCI) is expected to change each year as maintenance projects are deferred or completed. The functional scores could also change as programs are added or removed from schools. Depending on the evaluation schedule, these changes could result in changes to the modernization schedule potentially resulting in considerable public concern being expressed.