***Building Information - Shaker Heights City (44750) - Fernway Elem***

| | |
|---|---|
| Program Type | Classroom Facilities Assistance Program (CFAP) - Regular |
| Setting | Urban |
| Assessment Name | Fernway ES Assessment - Shaker Heights CSD - HPG 2021 with 11-3-21 update |
| Assessment Date (on-site; non-EEA) | 2021-08-13 |
| Kitchen Type | No Kitchen |
| Cost Set: | 2021 |
| Building Name | Fernway Elem |
| Building IRN | 11536 |
| Building Address | 17420 Fernway Rd |
| Building City | Shaker Heights |
| Building Zipcode | 44120 |
| Building Phone | (216) 295-4040 |
| Acreage | 2.39 |
| Current Grades: | K-4 |
| Teaching Stations | 21 |
| Number of Floors | 3 |
| Student Capacity | 342 |
| Current Enrollment | 266 |
| Enrollment Date | 2021-08-23 |

Enrollment Date is the date in which the current enrollment was taken.

| | |
|---|---|
| Number of Classrooms | 17 |
| Historical Register | **NO** |
| Building's Principal | Christopher C. Hayward |
| Building Type | Elementary |

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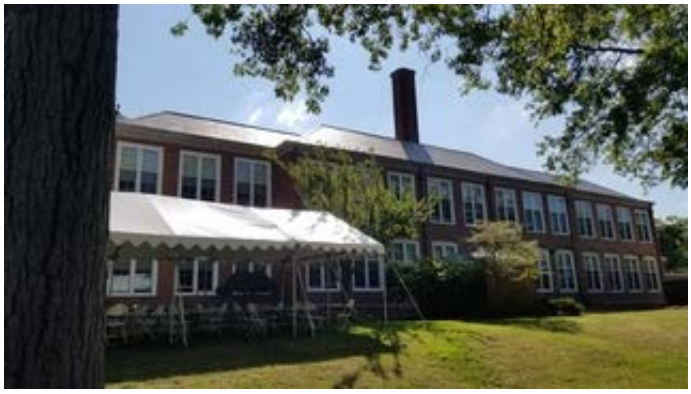
***Building Pictures - Shaker Heights City(44750) - Fernway Elem(11536)***

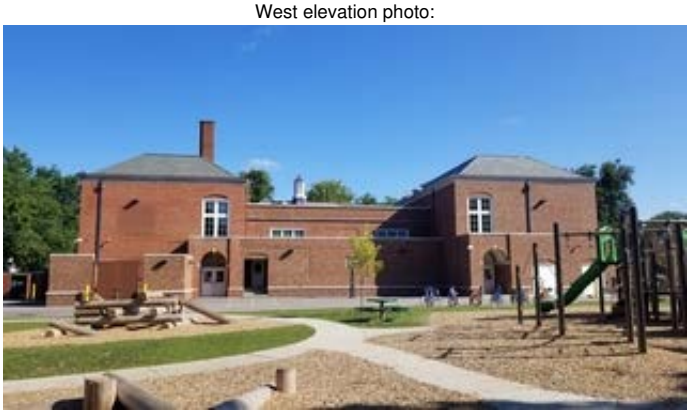
North elevation photo:



East elevation photo:

South elevation photo:

West elevation photo:



**GENERAL DESCRIPTION**

**42,746** Total Existing Square Footage
**1927,1958,2020** Building Dates
**K-4** Grades
**266** Current Enrollment
**21** Teaching Stations
**2.39** Site Acreage

Fernway Elementary School is a three floor, 42,746 square foot school building located on 2.39 acre site in an urban residential setting. The site is bordered by lightly traveled city streets. A single entrance onto the site does not facilitate proper separation of bus and other vehicular traffic. One way bus traffic is not provided. There is a curbside bus loading and unloading zone in front of the school, which is not separated from other vehicular traffic. Adequate parking is provided for staff, visitors and the disabled. Site features are suitable for outdoor instruction, which is enhanced through the district's provision of benches, picnic tables and exterior space within the playground area. The overall facility is equipped with concrete masonry unit and brick foundation walls on concrete footings. The overall facility has a brick veneer on a masonry bearing wall system. Interior walls are concrete masonry units, brick masonry and gypsum board. Floor construction of the base floor and intermediate floors of the overall facility is cast-in-place concrete type construction. Roof construction of the overall facility is cast-in-place concrete and metal framing type construction. The ventilation system is capable of providing Ohio Building Code and Ohio School Design Manual fresh air requirements. Average classroom size of 850 sf meets the current Ohio School Design Manual guidelines. The facility contains a security system, automatic fire suppression system, emergency egress lighting and an automatic fire alarm system. The building is ADA compliant. There is no kitchen space in this facility. No athletic facilities are provided on this site.

Significant Findings: The building was gutted down to the structure due to a roof fire and water damage in 2018. Everything, except the basement and most windows, are new from the rebuild and additions during the 2020 renovation. The windows are original with a few new and all of the exterior doors and roofs are new. The original story and a half auditorium, in the original construction, was renovated to create a second-floor library. The lower level coal room was also infilled during the 2020 renovation. The district's hazardous material report was not available for this assessment report. Specialized hazardous material assessment needs to occur at a later date. The OFCC will engage the services of an independent Enhanced Environmental Assessment (EEA) Consultant to perform and EEA to confirm scope and budget.

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## PROBABLE INFLATION COST SUMMARY FOR SUMMER 2022

The building assessment costs in this report are based on OFCC Assessment Cost Guidelines 2021. Based on current market conditions, the following cost projections have been made for Summer 2022 construction. Cost years beyond 2022 have been calculated with a 3.5% inflation rate.

| | Facility Cost Assessment Adjusted for Inflation through Summer 2022 | Estimated 2022 Assessement Cost | Cost/sf. |
|---|---|---|---|
| **A** | Heating System | $0.00 | $0.00 |
| **B** | Roofing | $0.00 | $0.00 |
| **C** | Ventilation / Air Conditioning | $0.00 | $0.00 |
| **D** | Electrical Systems | $41,040.43 | $0.96 |
| **E** | Plumbing and Fixtures | $0.00 | $0.00 |
| **F** | Windows | $0.00 | $0.00 |
| **G** | Structure: Foundation | $0.00 | $0.00 |
| **H** | Structure: Walls and Chimneys | $0.00 | $0.00 |
| **I** | Structure: Floors and Roofs | $0.00 | $0.00 |
| **J** | General Finishes | $13,533.00 | $0.32 |
| **K** | Interior Lighting | $0.00 | $0.00 |
| **L** | Security Systems | $68,815.72 | $1.61 |
| **M** | Emergency / Egress Lighting | $0.00 | $0.00 |
| **N** | Fire Alarm | $0.00 | $0.00 |
| **O** | Handicapped Access | $0.00 | $0.00 |
| **P** | Site Condition | $158,728.50 | $3.71 |
| **Q** | Sewage Systems | $0.00 | $0.00 |
| **R** | Water Supply | $500.00 | $0.01 |
| **S** | Exterior Doors | $0.00 | $0.00 |
| **T** | Hazardous Material | $0.00 | $0.00 |
| **U** | Life Safety | $0.00 | $0.00 |
| **V** | Loose Furnishings | $284,795.23 | $6.66 |
| **W** | Technology | $321,610.22 | $7.52 |
| **X** | Construction Contingency / Non-Construction Cost | $218,559.05 | $5.11 |
| | **ESCALATED OFCC GUIDELINE BUDGET (2021) - OME** | **$1,107,582.15** | **$25.91** |
| | **OFCC 2021 COST GUIDELINES BUDGET** | $1,013,146.59 | |
| | VARIANCE | $94,435.56 | |
| | VARIANCE % | 9.32% | |

***UNIT PRICE CONCERNS***

| | | | |
|---|---|---|---|
| | Total | $5,318.90 | |
| | **REV OFCC GUIDELINE UNIT PRICE BUDGET - OME** | **$1,112,901.05** | **$26.04** |
| | **OFCC 2021 COST GUIDELINES BUDGET** | **$1,013,146.59** | |
| | VARIANCE | **$99,754.46** | |
| | VARIANCE % | **9.85%** | |

***LOCALLY FUNDED INITIATIVES***

| | | |
|---|---|---|
| Total | $0.00 | |
| **REV OFCC GUIDELINE UNIT PRICE BUDGET - OME** | **$1,112,901.05** | **$26.04** |
| **OFCC 2021 COST GUIDELINES BUDGET** | **$1,013,146.59** | |
| VARIANCE | **$99,754.46** | |
| VARIANCE % | **9.85%** | |

| | |
|---|---|
| 2022 Costs | $1,112,901.05 |
| 2023 Costs with 3.5% inflation | $1,151,852.59 |
| 2024 Costs with 3.5% inflation | $1,192,167.43 |
| 2025 Costs with 3.5% inflation | $1,233,893.29 |
| 2026 Costs with 3.5% inflation | $1,277,079.55 |

***Building Construction Information - Shaker Heights City (44750) - Fernway Elem (11536)***

| Name | Year | Handicapped Access | Floors | Square Feet | Non OSDM Addition | Built Under ELPP |
|---|---|---|---|---|---|---|
| (01) 1927 Original Construction | 1927 | yes | 3 | 32,543 | no | no |
| (02) 1958 SW Addition | 1958 | yes | 2 | 3,110 | no | no |
| (03) 2020 SE and 2nd floor Media Addition | 2020 | yes | 2 | 7,093 | no | no |

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***Building Component Information - Shaker Heights City (44750) - Fernway Elem (11536)***

| Addition | Auditorium Fixed Seating | Corridors | Agricultural Education Lab | Primary Gymnasium | Media Center | Vocational Space | Student Dining | Kitchen | Natatorium | Indoor Tracks | Adult Education | Board Offices | Outside Agencies | Auxiliary Gymnasium |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (01) 1927 Original Construction (1927) | | 5659 | | 2329 | | | 1420 | | | | | | | |
| (02) 1958 SW Addition (1958) | | 810 | | | | | | | | | | | | |
| (03) 2020 SE and 2nd floor Media Addition (2020) | | 1170 | | | 1024 | | | | | | | | | |
| Total | 0 | 7,639 | 0 | 2,329 | 1,024 | 0 | 1,420 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | |
|---|---|
| **Master Planning Considerations** | The building was gutted down to the structure due to a roof fire and water damage in 2018. Everything, except the basement and most windows, are new from the rebuild and additions during the 2020 renovation. The windows are original with a few new and all of the exterior doors and roofs are new. The original story and a half auditorium in the original construction was renovated to create a second floor library. The lower level coal room was also infilled during the 2020 renovation. The district's hazardous material report was not available for this assessment report. Specialized hazardous material assessment needs to occur at a later date. The OFCC will engage the services of an independent Enhanced Environmental Assessment (EEA) Consultant to perform and EEA to confirm scope and budget. |

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# *Existing CT Programs for Assessment*

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| Program Type | Program Name | Related Space | Square Feet |
|---|---|---|---|
| No Records Found | | | |

**Legend:**

Not in current design manual

In current design manual but missing from assessment

# Building Summary - Fernway Elem (11536)

| | | | | | |
|---|---|---|---|---|---|
| **District:** | Shaker Heights City | **County:** | Cuyahoga | **Area:** | Northeastern Ohio (8) |
| **Name:** | Fernway Elem | **Contact:** | Christopher C. Hayward | | |
| **Address:** | 17420 Fernway Rd | **Phone:** | (216) 295-4040 | | |
| | Shaker Heights,OH 44120 | **Date Prepared:** | 2021-08-13 | **By:** | Kevin Harrison, AIA, LEED AP |
| **Bldg. IRN:** | 11536 | **Date Revised:** | 2021-11-03 | **By:** | Bill Prenosil |

| | | | |
|---|---|---|---|
| Current Grades | K-4 | Acreage: | 2.39 |
| Proposed Grades | N/A | Teaching Stations: | 21 |
| Current Enrollment | 266 | Classrooms: | 17 |
| Projected Enrollment | N/A | | |

| Addition | Date | HA | Number of Floors | Current Square Feet |
|---|---|---|---|---|
| (01) 1927 Original Construction | 1927 | yes | 3 | 32,543 |
| (02) 1958 SW Addition | 1958 | yes | 2 | 3,110 |
| (03) 2020 SE and 2nd floor Media Addition | 2020 | yes | 2 | 7,093 |
| **Total** | | | | **42,746** |

| | | |
|---|---|---|
| *HA | = | Handicapped Access |
| *Rating | =1 | Satisfactory |
| | =2 | Needs Repair |
| | =3 | Needs Replacement |
| *Const P/S | = | Present/Scheduled Construction |

Suitability Appraisal Summary

| Section | Points Possible | Points Earned | Percentage | Rating Category |
|---|---|---|---|---|
| Cover Sheet | — | — | — | — |
| 1.0 The School Site | 100 | 63 | 63% | Borderline |
| 2.0 Structural and Mechanical Features | 200 | 186 | 93% | Excellent |
| 3.0 Plant Maintainability | 100 | 84 | 84% | Satisfactory |
| 4.0 Building Safety and Security | 200 | 178 | 89% | Satisfactory |
| 5.0 Educational Adequacy | 200 | 162 | 81% | Satisfactory |
| 6.0 Environment for Education | 200 | 181 | 91% | Excellent |
| LEED Observations | — | — | — | — |
| Commentary | — | — | — | — |
| Total | 1000 | 854 | 85% | Satisfactory |

Enhanced Environmental Hazards Assessment Cost Estimates

| FACILITY ASSESSMENT Cost Set: 2021 | | Rating | Dollar Assessment | C |
|---|---|---|---|---|
| A. | Heating System | 1 | $0.00 | - |
| B. | Roofing | 1 | $0.00 | - |
| C. | Ventilation / Air Conditioning | 1 | $0.00 | - |
| D. | Electrical Systems | 2 | $36,334.10 | - |
| E. | Plumbing and Fixtures | 1 | $0.00 | - |
| F. | Windows | 1 | $0.00 | - |
| G. | Structure: Foundation | 1 | $0.00 | - |
| H. | Structure: Walls and Chimneys | 1 | $0.00 | - |
| I. | Structure: Floors and Roofs | 1 | $0.00 | - |
| J. | General Finishes | 2 | $13,000.00 | - |
| K. | Interior Lighting | 1 | $0.00 | - |
| L. | Security Systems | 2 | $57,707.10 | - |
| M. | Emergency/Egress Lighting | 1 | $0.00 | - |
| N. | Fire Alarm | 1 | $0.00 | - |
| O. | Handicapped Access | 1 | $0.00 | - |
| P. | Site Condition | 2 | $150,989.00 | - |
| Q. | Sewage System | 1 | $0.00 | - |
| R. | Water Supply | 2 | $500.00 | - |
| S. | Exterior Doors | 1 | $0.00 | - |
| T. | Hazardous Material | 1 | $0.00 | - |
| U. | Life Safety | 1 | $0.00 | - |
| V. | Loose Furnishings | 1 | $277,849.00 | - |
| W. | Technology | 2 | $277,849.00 | - |
| X. | Construction Contingency / Non-Construction Cost | - | $198,918.39 | - |
| Total | | | $1,013,146.59 | |

| | |
|---|---|
| C=Under Contract | |
| | |
| Renovation Cost Factor | 109.74% |
| Cost to Renovate (Cost Factor applied) | $1,111,827.07 |

*The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.*

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## (01) 1927 Original Construction (1927) Summary

| | | | | | |
|---|---|---|---|---|---|
| **District:** | Shaker Heights City | **County:** | Cuyahoga | **Area:** | Northeastern Ohio (8) |
| **Name:** | Fernway Elem | **Contact:** | Christopher C. Hayward | | |
| **Address:** | 17420 Fernway Rd | **Phone:** | (216) 295-4040 | | |
| | Shaker Heights,OH 44120 | **Date Prepared:** | 2021-08-13 | **By:** | Kevin Harrison, AIA, LEED AP |
| **Bldg. IRN:** | 11536 | **Date Revised:** | 2021-11-03 | **By:** | Bill Prenosil |

| | | | |
|---|---|---|---|
| Current Grades | K-4 | Acreage: | 2.39 |
| Proposed Grades | N/A | Teaching Stations: | 21 |
| Current Enrollment | 266 | Classrooms: | 17 |
| Projected Enrollment | N/A | | |

| Addition | Date | HA | Number of Floors | Current Square Feet |
|---|---|---|---|---|
| **(01) 1927 Original Construction** | **1927** | **yes** | **3** | **32,543** |
| (02) 1958 SW Addition | 1958 | yes | 2 | 3,110 |
| (03) 2020 SE and 2nd floor Media Addition | 2020 | yes | 2 | 7,093 |
| Total | | | | **42,746** |

| | | |
|---|---|---|
| *HA | = | Handicapped Access |
| *Rating | =1 | Satisfactory |
| | =2 | Needs Repair |
| | =3 | Needs Replacement |
| *Const P/S | = | Present/Scheduled Construction |

| FACILITY ASSESSMENT Cost Set: 2021 | | Rating | Dollar Assessment | C |
|---|---|---|---|---|
| A. | Heating System | 1 | $0.00 | - |
| B. | Roofing | 1 | $0.00 | - |
| C. | Ventilation / Air Conditioning | 1 | $0.00 | - |
| D. | Electrical Systems | 2 | $27,661.55 | - |
| E. | Plumbing and Fixtures | 1 | $0.00 | - |
| F. | Windows | 1 | $0.00 | - |
| G. | Structure: Foundation | 1 | $0.00 | - |
| H. | Structure: Walls and Chimneys | 1 | $0.00 | - |
| I. | Structure: Floors and Roofs | 1 | $0.00 | - |
| J. | General Finishes | 2 | $13,000.00 | - |
| K. | Interior Lighting | 1 | $0.00 | - |
| L. | Security Systems | 2 | $43,933.05 | - |
| M. | Emergency/Egress Lighting | 1 | $0.00 | - |
| N. | Fire Alarm | 1 | $0.00 | - |
| O. | Handicapped Access | 1 | $0.00 | - |
| P. | Site Condition | 2 | $127,764.50 | - |
| Q. | Sewage System | 1 | $0.00 | - |
| R. | Water Supply | 2 | $500.00 | - |
| S. | Exterior Doors | 1 | $0.00 | - |
| T. | Hazardous Material | 1 | $0.00 | - |
| U. | Life Safety | 1 | $0.00 | - |
| V. | Loose Furnishings | 1 | $211,529.50 | - |
| W. | Technology | 2 | $211,529.50 | - |
| X. | Construction Contingency / Non-Construction Cost | - | $155,356.70 | - |
| Total | | | $791,274.80 | |

Suitability Appraisal Summary

| Section | Points Possible | Points Earned | Percentage | Rating Category |
|---|---|---|---|---|
| Cover Sheet | — | — | — | — |
| 1.0 The School Site | 100 | 63 | 63% | Borderline |
| 2.0 Structural and Mechanical Features | 200 | 186 | 93% | Excellent |
| 3.0 Plant Maintainability | 100 | 84 | 84% | Satisfactory |
| 4.0 Building Safety and Security | 200 | 178 | 89% | Satisfactory |
| 5.0 Educational Adequacy | 200 | 162 | 81% | Satisfactory |
| 6.0 Environment for Education | 200 | 181 | 91% | Excellent |
| LEED Observations | — | — | — | — |
| Commentary | — | — | — | — |
| Total | 1000 | 854 | 85% | Satisfactory |

Enhanced Environmental Hazards Assessment Cost Estimates

| | |
|---|---|
| C=Under Contract | |
| | |
| Renovation Cost Factor | 109.74% |
| Cost to Renovate (Cost Factor applied) | $868,344.97 |

*The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.*

## (02) 1958 SW Addition (1958) Summary

| | | | | | |
|---|---|---|---|---|---|
| **District:** | Shaker Heights City | **County:** | Cuyahoga | **Area:** | Northeastern Ohio (8) |
| **Name:** | Fernway Elem | **Contact:** | Christopher C. Hayward | | |
| **Address:** | 17420 Fernway Rd | **Phone:** | (216) 295-4040 | | |
| | Shaker Heights,OH 44120 | **Date Prepared:** | 2021-08-13 | **By:** | Kevin Harrison, AIA, LEED AP |
| **Bldg. IRN:** | 11536 | **Date Revised:** | 2021-11-03 | **By:** | Bill Prenosil |

| | | | |
|---|---|---|---|
| Current Grades | K-4 | Acreage: | 2.39 |
| Proposed Grades | N/A | Teaching Stations: | 21 |
| Current Enrollment | 266 | Classrooms: | 17 |
| Projected Enrollment | N/A | | |

| Addition | Date | HA | Number of Floors | Current Square Feet |
|---|---|---|---|---|
| (01) 1927 Original Construction | 1927 | yes | 3 | 32,543 |
| **(02) 1958 SW Addition** | **1958** | **yes** | **2** | **3,110** |
| (03) 2020 SE and 2nd floor Media Addition | 2020 | yes | 2 | 7,093 |
| Total | | | | **42,746** |

| | | |
|---|---|---|
| *HA | = | Handicapped Access |
| *Rating | =1 | Satisfactory |
| | =2 | Needs Repair |
| | =3 | Needs Replacement |
| *Const P/S | = | Present/Scheduled Construction |

| | FACILITY ASSESSMENT Cost Set: 2021 | Rating | Dollar Assessment | C |
|---|---|---|---|---|
| A. | Heating System | 1 | $0.00 | - |
| B. | Roofing | 1 | $0.00 | - |
| C. | Ventilation / Air Conditioning | 1 | $0.00 | - |
| D. | Electrical Systems | 2 | $2,643.50 | - |
| E. | Plumbing and Fixtures | 1 | $0.00 | - |
| F. | Windows | 1 | $0.00 | - |
| G. | Structure: Foundation | 1 | $0.00 | - |
| H. | Structure: Walls and Chimneys | 1 | $0.00 | - |
| I. | Structure: Floors and Roofs | 1 | $0.00 | - |
| **J.** | **General Finishes** | **2** | **$0.00** | - |
| K. | Interior Lighting | 1 | $0.00 | - |
| L. | Security Systems | 2 | $4,198.50 | - |
| M. | Emergency/Egress Lighting | 1 | $0.00 | - |
| N. | Fire Alarm | 1 | $0.00 | - |
| O. | Handicapped Access | 1 | $0.00 | - |
| P. | Site Condition | 2 | $6,975.00 | - |
| Q. | Sewage System | 1 | $0.00 | - |
| **R.** | **Water Supply** | **2** | **$0.00** | - |
| S. | Exterior Doors | 1 | $0.00 | - |
| T. | Hazardous Material | 1 | $0.00 | - |
| U. | Life Safety | 1 | $0.00 | - |
| V. | Loose Furnishings | 1 | $20,215.00 | - |
| W. | Technology | 2 | $20,215.00 | - |
| X. | Construction Contingency / Non-Construction Cost | - | $13,252.70 | - |
| Total | | | $67,499.70 | |

### Suitability Appraisal Summary

| Section | Points Possible | Points Earned | Percentage | Rating Category |
|---|---|---|---|---|
| Cover Sheet | — | — | — | — |
| 1.0 The School Site | 100 | 63 | 63% | Borderline |
| 2.0 Structural and Mechanical Features | 200 | 186 | 93% | Excellent |
| 3.0 Plant Maintainability | 100 | 84 | 84% | Satisfactory |
| 4.0 Building Safety and Security | 200 | 178 | 89% | Satisfactory |
| 5.0 Educational Adequacy | 200 | 162 | 81% | Satisfactory |
| 6.0 Environment for Education | 200 | 181 | 91% | Excellent |
| LEED Observations | — | — | — | — |
| Commentary | — | — | — | — |
| Total | 1000 | 854 | 85% | Satisfactory |

### Enhanced Environmental Hazards Assessment Cost Estimates

| | |
|---|---|
| C=Under Contract | |
| | |
| Renovation Cost Factor | 109.74% |
| Cost to Renovate (Cost Factor applied) | $74,074.18 |

*The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.*

## (03) 2020 SE and 2nd floor Media Addition (2020) Summary

| | | | | | |
|---|---|---|---|---|---|
| **District:** | Shaker Heights City | **County:** | Cuyahoga | **Area:** | Northeastern Ohio (8) |
| **Name:** | Fernway Elem | **Contact:** | Christopher C. Hayward | | |
| **Address:** | 17420 Fernway Rd | **Phone:** | (216) 295-4040 | | |
| | Shaker Heights,OH 44120 | **Date Prepared:** | 2021-08-13 | **By:** | Kevin Harrison, AIA, LEED AP |
| **Bldg. IRN:** | 11536 | **Date Revised:** | 2021-11-03 | **By:** | Bill Prenosil |

| | | | |
|---|---|---|---|
| Current Grades | K-4 | Acreage: | 2.39 |
| Proposed Grades | N/A | Teaching Stations: | 21 |
| Current Enrollment | 266 | Classrooms: | 17 |
| Projected Enrollment | N/A | | |

| Addition | Date | HA | Number of Floors | Current Square Feet |
|---|---|---|---|---|
| (01) 1927 Original Construction | 1927 | yes | 3 | 32,543 |
| (02) 1958 SW Addition | 1958 | yes | 2 | 3,110 |
| **(03) 2020 SE and 2nd floor Media Addition** | **2020** | **yes** | **2** | **7,093** |
| Total | | | | **42,746** |

| | | |
|---|---|---|
| *HA | = | Handicapped Access |
| *Rating | =1 | Satisfactory |
| | =2 | Needs Repair |
| | =3 | Needs Replacement |
| *Const P/S | = | Present/Scheduled Construction |

Suitability Appraisal Summary

| Section | Points Possible | Points Earned | Percentage | Rating Category |
|---|---|---|---|---|
| Cover Sheet | — | — | — | — |
| 1.0 The School Site | 100 | 63 | 63% | Borderline |
| 2.0 Structural and Mechanical Features | 200 | 186 | 93% | Excellent |
| 3.0 Plant Maintainability | 100 | 84 | 84% | Satisfactory |
| 4.0 Building Safety and Security | 200 | 178 | 89% | Satisfactory |
| 5.0 Educational Adequacy | 200 | 162 | 81% | Satisfactory |
| 6.0 Environment for Education | 200 | 181 | 91% | Excellent |
| LEED Observations | — | — | — | — |
| Commentary | — | — | — | — |
| Total | 1000 | 854 | 85% | Satisfactory |

Enhanced Environmental Hazards Assessment Cost Estimates

| | |
|---|---|
| C=Under Contract | |
| | |
| Renovation Cost Factor | 109.74% |
| Cost to Renovate (Cost Factor applied) | $169,407.93 |

*The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.*

| | FACILITY ASSESSMENT Cost Set: 2021 | Rating | Dollar Assessment | C |
|---|---|---|---|---|
| A. | Heating System | 1 | $0.00 | - |
| B. | Roofing | 1 | $0.00 | - |
| C. | Ventilation / Air Conditioning | 1 | $0.00 | - |
| D. | Electrical Systems | 2 | $6,029.05 | - |
| E. | Plumbing and Fixtures | 1 | $0.00 | - |
| F. | Windows | 1 | $0.00 | - |
| G. | Structure: Foundation | 1 | $0.00 | - |
| H. | Structure: Walls and Chimneys | 1 | $0.00 | - |
| I. | Structure: Floors and Roofs | 1 | $0.00 | - |
| **J.** | **General Finishes** | **2** | **$0.00** | - |
| K. | Interior Lighting | 1 | $0.00 | - |
| L. | Security Systems | 2 | $9,575.55 | - |
| M. | Emergency/Egress Lighting | 1 | $0.00 | - |
| N. | Fire Alarm | 1 | $0.00 | - |
| O. | Handicapped Access | 1 | $0.00 | - |
| P. | Site Condition | 2 | $16,249.50 | - |
| Q. | Sewage System | 1 | $0.00 | - |
| **R.** | **Water Supply** | **2** | **$0.00** | - |
| S. | Exterior Doors | 1 | $0.00 | - |
| T. | Hazardous Material | 1 | $0.00 | - |
| U. | Life Safety | 1 | $0.00 | - |
| V. | Loose Furnishings | 1 | $46,104.50 | - |
| W. | Technology | 2 | $46,104.50 | - |
| X. | Construction Contingency / Non-Construction Cost | - | $30,308.99 | - |
| Total | | | $154,372.09 | |

## A. Heating System

Description: The existing heating system for the overall facility is a natural gas-fired hot water system with rooftop mounted air-handlers. The 2 boilers, manufactured by P.K. Mach were installed in 2019 during the renovation/rebuild of the facility and are in excellent condition and are in the lower-level mechanical room of the 1927 original construction. The boilers are rated at 460,000 BTU/hr. each for a total output of 920,000 BTU/hr. Heating water is distributed to terminal units consisting of roof mounted air-handlers. The controls are digital and installed in 2019 with the complete HVAC system installation. The existing overall facility does contain a central air conditioning system as well as multiple split system units. The overall facility does not contain window air conditioners. The existing cooling system for the overall facility is a pad mounted chiller. The pad mounted chiller was installed in 2019 during the renovation/rebuild of the facility and is in excellent condition. Chilled water is distributed to roof mounted air-handlers. The system does feature individual temperature controls in all spaces required by the OSDM. The overall system does not feature any central energy recovery systems. The ventilation system in the overall facility consists of air handlers, mixing boxes, and exhaust fans to provide outside air into interior spaces. The overall facility contains transfer grilles for relief air venting. The system is capable of providing the 15 CFM per person outdoor air requirements of the Ohio Building Code and Ohio School Design Manual. The existing clear plenum space will allow for the installation of ductwork or ductwork reconfiguration, if required. According to school officials, the site does not contain underground fuel tanks.

Rating: 1 Satisfactory

Recommendations: No work required. 11-2-21 Update: Correction to note above: The building's two DOAS air handlers are equipped with energy recovery wheels.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927)<br>32,543 ft² | (02) 1958 SW Addition (1958)<br>3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020)<br>7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| Sum: | | | $0.00 | $0.00 | $0.00 | $0.00 | | |

Gas fired boiler


Hot water circulating pump

Back to Assessment Summary

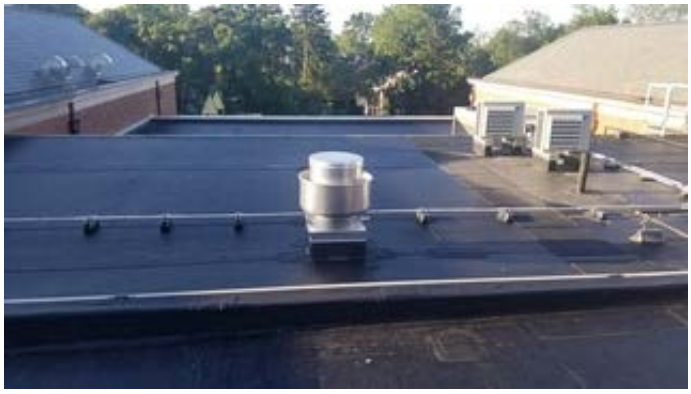
## B. Roofing

Description: The roof over the overall facility is primarily a slate shingle system that was installed in 2020, and is in good condition. Portions of the facility that have a flat roof system consist of a rubber membrane system that was installed in 2020, and is in good condition. There are no District reports of current leaking. No Signs of past leaking were observed during the physical assessment. Access to the roof was gained by access ladder and hatch that is in good condition. Fall safety protection cages are not required at the access. There were no observations of standing water on the roof. Metal cap flashings and stone copings are in good condition. Roof storm drainage is addressed through a system of copper gutters and downspouts, which are properly located, and in good condition. The roof is equipped with overflow roof drains in sufficient quantity and in good condition. No problems requiring attention were encountered with any roof penetrations. There are no covered walkways attached to this structure.

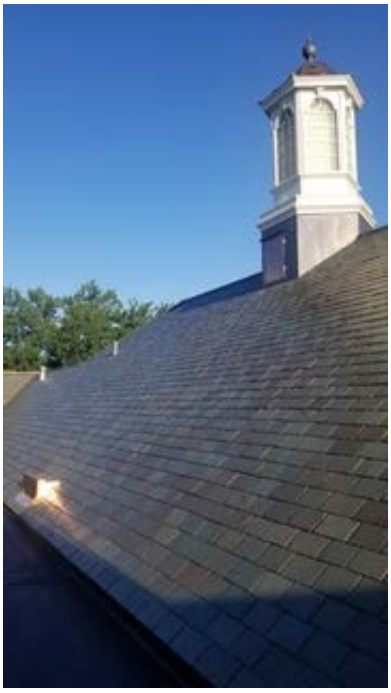
Rating: 1 Satisfactory

Recommendations: Existing conditions require no renovation or replacement at the present time.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927)<br>32,543 ft² | (02) 1958 SW Addition (1958)<br>3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020)<br>7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| Sum: | | | $0.00 | $0.00 | $0.00 | $0.00 | | |



Flat roofs over 1927 original construction and 2020 addition



Slate roof at 1927 original construction

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## C. Ventilation / Air Conditioning

Description: The existing heating system for the overall facility is a natural gas-fired hot water system with rooftop mounted air-handlers. The 2 boilers, manufactured by P.K. Mach were installed in 2019 during the renovation/rebuild of the facility and are in excellent condition and are in the lower-level mechanical room of the 1927 original construction. The boilers are rated at 460,000 BTU/hr. each for a total output of 920,000 BTU/hr. Heating water is distributed to terminal units consisting of roof mounted air-handlers. The controls are digital and installed in 2019 with the complete HVAC system installation. The existing overall facility does contain a central air conditioning system as well as multiple split system units. The overall facility does not contain window air conditioners. The existing cooling system for the overall facility is a pad mounted chiller. The pad mounted chiller was installed in 2019 during the renovation/rebuild of the facility and is in excellent condition. Chilled water is distributed to roof mounted air-handlers. The system does feature individual temperature controls in all spaces required by the OSDM. The overall system does not feature any central energy recovery systems. The ventilation system in the overall facility consists of air handlers, mixing boxes, and exhaust fans to provide outside air into interior spaces. The overall facility contains transfer grilles for relief air venting. The system can provide the 15 CFM per person outdoor air requirements of the Ohio Building Code and Ohio School Design Manual. The facility does contain adequate restroom exhaust system. The existing restroom exhaust system is in excellent condition. The facility does contain a kiln for the art program. The existing art room kiln does contain exhaust. The existing art room kiln exhaust is in excellent condition.

Rating: 1 Satisfactory

Recommendations: No work required.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927)<br>32,543 ft² | (02) 1958 SW Addition (1958)<br>3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020)<br>7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| Sum: | | | $0.00 | $0.00 | $0.00 | $0.00 | | |


Pad mounted chiller

Cold water circulating pumps

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## D. Electrical Systems

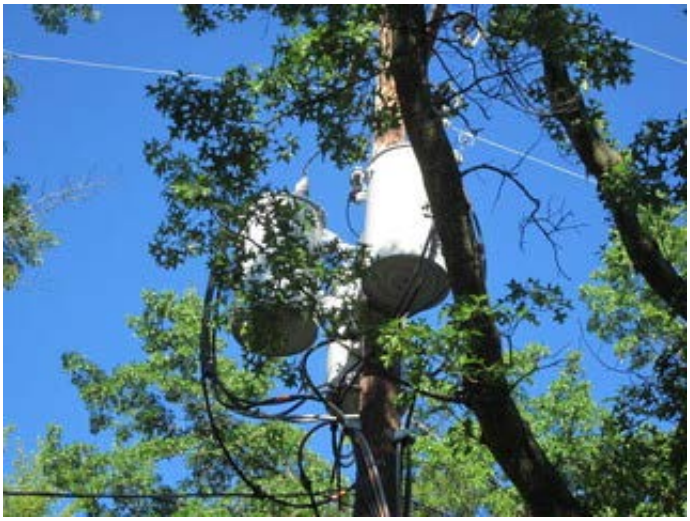
Description: The electrical system for the overall facility is a 480/277-volt, 800-amp, 3-phase, 4-wire system in excellent condition. The electrical system was installed during the 2019 renovation/rebuild of the facility. The main distribution equipment is General Electric. The panel system is in excellent condition. The panel system was installed during the 2019 renovation/rebuild of the facility and can be expanded for additional capacity. The facility contains an emergency generator. The emergency generator was installed during the 2019 renovation/rebuild of the facility. The pole mounted transformers are owned by the utility company. Classrooms are equipped with adequate electrical outlets. Corridors and the exterior of the building are equipped with adequate electrical outlets for building maintenance. The facility does not contain lightning protection with grounding.

Rating: 2 Needs Repair

Recommendations: Provide building lightning protection and grounding.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927) 32,543 ft² | (02) 1958 SW Addition (1958) 3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020) 7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| Lightning Protection | $0.60 | sq.ft. (of entire building addition) | | Required | Required | Required | $25,647.60 | |
| Grounding | $0.25 | sq.ft. (of entire building addition) | | Required | Required | Required | $10,686.50 | |
| Sum: | | | $36,334.10 | $27,661.55 | $2,643.50 | $6,029.05 | | |

Main distribution panel



Pole mounted transformers

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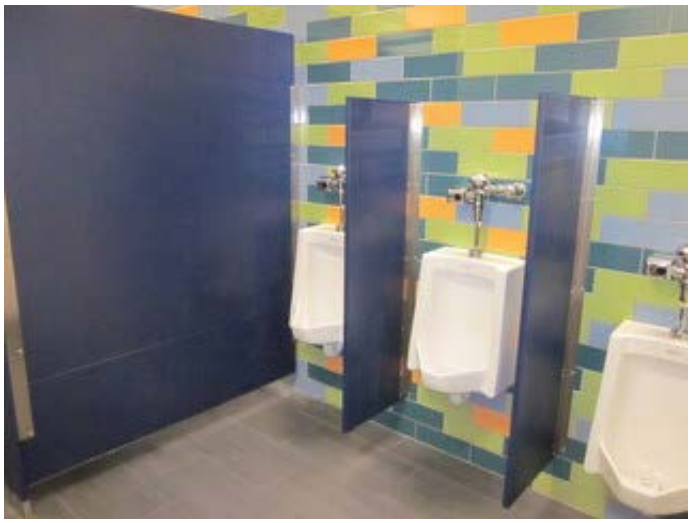
## E. Plumbing and Fixtures

Description: A back flow preventer is provided. The facility does not contain a water treatment system. Domestic supply piping is copper in excellent condition. Sanitary waste piping is cast iron in excellent condition. The two (2) domestic water heaters are natural gas 75-gallon A.O. Smith units located in the lower-level mechanical room. The domestic water heaters were installed during the 2019 renovation/rebuild and are in excellent condition. The school contains two (2) student group restrooms for boys, one (1) on each floor, two (2) large group restrooms for girls, one (1) on each floor, one (1) health clinic restroom, one (1) family restroom, one (1) each for a total of three single student restrooms in each of the three (3) kindergarten classrooms, and two (2) restrooms for staff. The overall facility does contain a minimum of one (1) water bottle combination unit on each floor. A water bottle filling station may be a stand-alone unit OR integrated into a drinking fountain and identified as a ''combination unit''. The overall facility must contain a minimum of one (1) combination unit for each 100 students. The current enrollment is 266 students. The facility contains three (3) combination units in the corridors. The overall facility must contain a minimum of one (1) combination unit in or near each cafeteria. The student dining area contains one (1) combination unit. The overall facility must contain a minimum of one (1) combination unit in or near each gymnasium. The gymnasium contains one (1) combination unit. The existing combination units are accessible to all people in compliance with the federal Americans with Disabilities Act. Kindergarten restrooms are required and are present in each of the three (3) kindergarten classrooms. The facility does not contain a kitchen or kitchen plumbing fixtures. The school does meet the OBC requirements for fixtures. Relative to LEED requirements, the school is equipped with low flow type fixtures and all the fixtures are equipped with infrared motion activated valves and faucets. For female students, per OBC and OSDM requirements, this facility should be equipped with three (3) student water closets and two (2) student lavatory sinks. Observations revealed that the school is equipped with ten (10) student water closets and four (4) student lavatories. For male students, per OBC and OSDM requirements, this facility should be equipped with two (2) student water closets, two (2) student lavatory sinks, and two (2) student urinals. Observations revealed that the school is equipped with four (4) student water closets, six (6) student urinals, and four (4) student lavatories. Per OBC and OSDM requirements, this facility should be equipped with two (2) art classroom sinks. Observations revealed that the school is equipped with three (3) art classroom sinks. For staff, per OBC and OSDM requirements, this facility should be equipped with two (2) staff toilets, and two (2) staff lavatory sinks. Observations revealed that the school is equipped with three (3) staff toilets, and three (3) staff lavatory sinks. The exterior of the building does contain an adequate quantity of hose bibs. The existing exterior hose bibs are in excellent condition.

Rating: 1 Satisfactory

Recommendations: No work required.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927) 32,543 ft² | (02) 1958 SW Addition (1958) 3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020) 7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| Sum: | | | $0.00 | $0.00 | $0.00 | $0.00 | | |



Wall mounted restroom fixtures

Electric water coolers with bottle fillers

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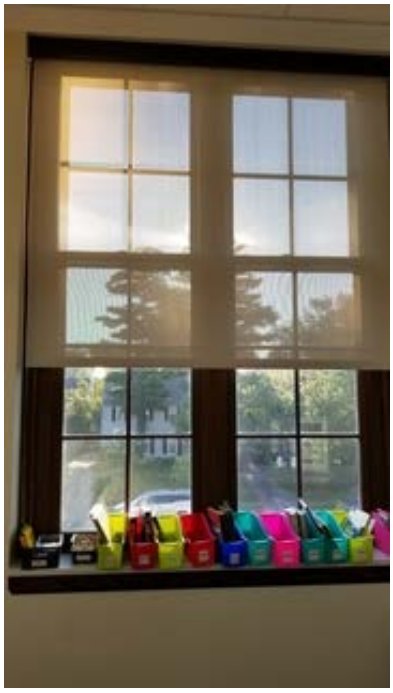
## F. Windows

Description: The overall facility is equipped with thermally broken wood frame aluminum exterior clad windows with a double glazed insulated type window system in good condition. Window system seals are in good condition, with no air and water infiltration being experienced. Window system hardware is in good condition. The window system features surface mounted blinds, in good condition. The window system is equipped with insect screens on operable windows, in good condition. This facility is not equipped with any curtain wall systems. This facility does not feature any glass block windows. The exterior doors in the overall facility are equipped with thermally broken aluminum frame vision panels with a double glazed insulated window system, in good condition. The main entrance doors feature historically restored wood frame transom and sidelights with a single glazed window system, in fair condition. The school does not contain skylights. Window security grilles are not provided for ground floor windows. There is not a greenhouse associated with this school.

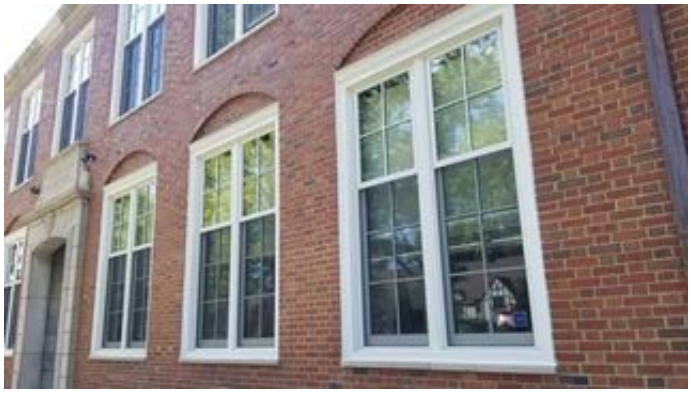
Rating: 1 Satisfactory

Recommendations: Existing conditions require no renovation or replacement at the present time.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927)<br>32,543 ft² | (02) 1958 SW Addition (1958)<br>3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020)<br>7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| Sum: | | | $0.00 | $0.00 | $0.00 | $0.00 | | |



Window with surface mounted blind



Windows in 1927 original construction

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## G. Structure: Foundation

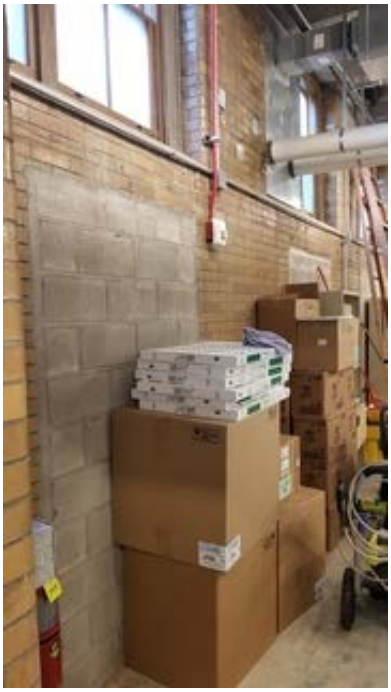
Description: The overall facility is equipped with concrete masonry unit and brick foundation walls on concrete footings, which displayed no locations of significant differential settlement, cracking, or leaking, and are in fair condition. The district reports that there has been no past leaking. No grading or site drainage deficiencies were noted around the perimeter of the structure that are contributing or could contribute to foundation deterioration.

Rating: 1 Satisfactory

Recommendations: Existing conditions require no renovation or replacement at the present time.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927)<br>32,543 ft² | (02) 1958 SW Addition (1958)<br>3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020)<br>7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| Sum: | | | $0.00 | $0.00 | $0.00 | $0.00 | | |

Masonry block foundation walls



Masonry block and brick foundation walls

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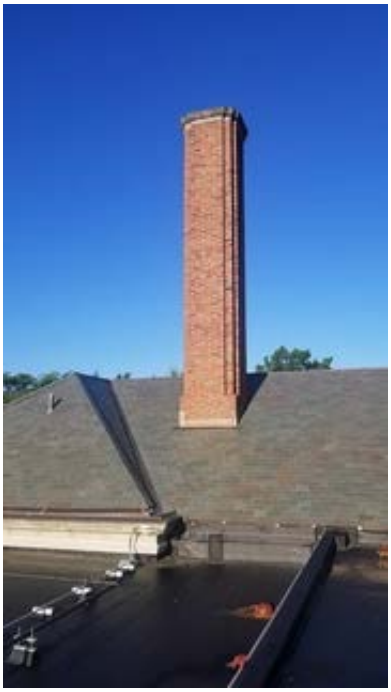
## H. Structure: Walls and Chimneys

Description: The overall facility has a brick veneer on a masonry bearing wall system, which displayed no locations of deterioration, and is in good condition. The exterior masonry appears to have appropriately spaced and adequately caulked control joints in good condition. The exterior masonry has been cleaned and sealed in recent years, showing no evidence of mortar deterioration. Architectural exterior accent materials consist of stone, which is in good condition. Interior walls are concrete masonry units, brick masonry, and gypsum board and are in good condition. Interior masonry appears to have adequately spaced and caulked control joints in good condition. Soffits are in good condition. The window sills are stone, and are in good condition. The exterior lintels are steel, and are in good condition. One remaining chimney is in good condition and was restored in the 2020 addition and renovation, is non-functional, and was blocked-in during the renovation process.

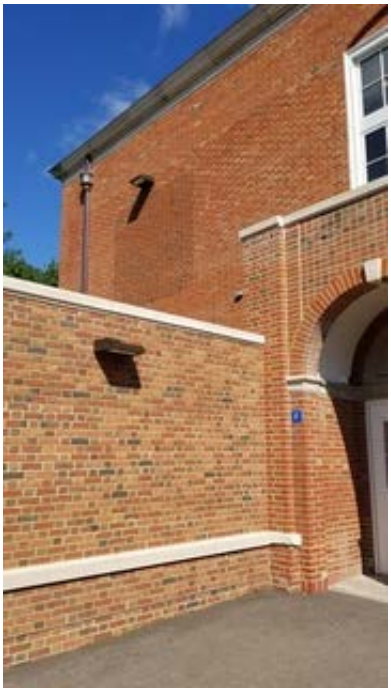
Rating: 1 Satisfactory

Recommendations: Existing conditions require no renovation or replacement at the present time.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927) 32,543 ft² | (02) 1958 SW Addition (1958) 3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020) 7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| Sum: | | | $0.00 | $0.00 | $0.00 | $0.00 | | |



Original chimney restored in 2020 renovation



Masonry brick exterior walls

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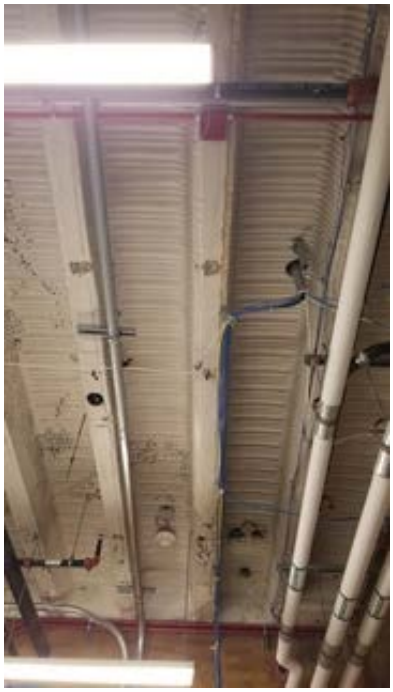
## I. Structure: Floors and Roofs

Description: The floor construction of the base floor of the overall facility is cast-in-place concrete type construction, and is in fair condition. The floor construction of the intermediate floors of the overall facility is cast-in-place concrete type construction, and is in fair condition. Ceiling to structural deck spaces are sufficient to accommodate HVAC, electrical, and plumbing scopes of work in required renovations. The roof construction of the overall facility is cast-in-place concrete and metal framing type construction, and is in good condition.

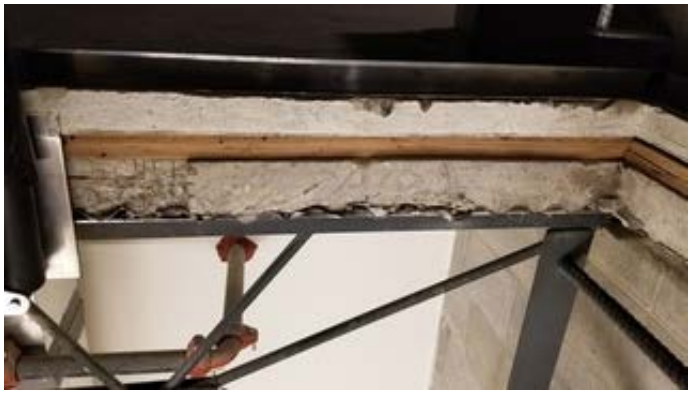
Rating: 1 Satisfactory

Recommendations: Existing conditions require no renovation or replacement at the present time.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927)<br>32,543 ft² | (02) 1958 SW Addition (1958)<br>3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020)<br>7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| Sum: | | | $0.00 | $0.00 | $0.00 | $0.00 | | |



Cast in place concrete floor structure



Cast concrete on metal deck at roof structure of 1927 original construction

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## J. General Finishes

Description: The overall facility features conventionally partitioned classrooms with vinyl type flooring, lay-in type ceilings, as well as drywall type wall finishes, and they are in good condition. The overall facility has corridors with terrazzo tile type flooring, lay-in type ceilings, as well as drywall type wall finishes, and they are in good condition. The overall facility has restrooms with ceramic tile type flooring, lay-in type ceilings, as well as tile and drywall type wall finishes, and they are in good condition. Toilet partitions are plastic composite type construction, and are in good condition. Classroom casework in the overall facility is wood type construction with plastic laminate tops, is adequately provided, and in good condition. Classrooms are provided adequate markerboards, smart-boards and tackboards, which are in good condition. The lockers, located in the corridors, are adequately provided, and in good condition. The art program is equipped with a kiln, and the existing kiln ventilation is adequate. The facility is equipped with wood non-louvered interior doors that are recessed with proper ADA hardware and clearances, and in good condition. The gymnasium space has wood type flooring, exposed cast-in-place concrete type ceilings, as well as drywall type wall finishes, and they are in good condition. No seating is provided in the gymnasium. Gymnasium basketball backboards are not provided in the gymnasium. The media center, located in the 2020 addition, has carpet and vinyl tile type flooring, lay-in type ceilings, as well as drywall type wall finishes, and they are in good condition. Student dining, located in the 1927 original construction, has vinyl tile type flooring, lay-in type ceilings, as well as drywall type wall finishes, and they are in good condition. There is no kitchen space in this facility. The district delivers food to the facility, which is distributed via serving tables.

Rating: 2 Needs Repair

Recommendations: Provide for replacement of basketball backboards due to age and condition.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927) 32,543 ft² | (02) 1958 SW Addition (1958) 3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020) 7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| Basketball Backboard Replacement | $6,500.00 | each | | 2 Required | | | $13,000.00 | (electric) |
| Sum: | | | $13,000.00 | $13,000.00 | $0.00 | $0.00 | | |

Typical classroom finishes

Typical corridor finishes

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## K. Interior Lighting

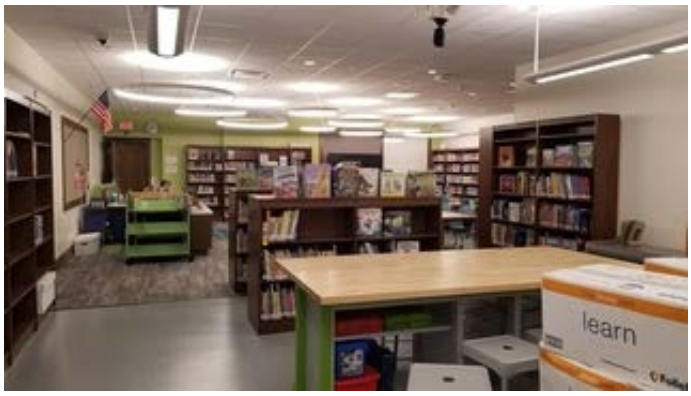
Description: Typical classrooms in the overall facility are equipped with LED lay-in trough type fixtures with dual level switching. Classroom fixtures are in good condition, providing an average illumination of 62 FC, thus complying with the 50 FC recommended by the OSDM. The typical corridors in the overall facility are equipped with LED lay-in trough type fixtures with dual level switching. Corridor fixtures are in good condition, providing an average illumination of 45 FC, thus complying with the 20 FC recommended by the OSDM. The primary gymnasium space is equipped with LED pendant fixture type lighting, in good condition, providing an average illumination of 35 FC, which is less than the 50 FC recommended by the OSDM. The media center is equipped with LED lay-in trough type fixtures, as well as LED ring type fixtures in good condition, providing an average illumination of 89 FC, thus complying with the 50 FC recommended by the OSDM. The student dining space is equipped with LED lay-in trough type fixtures with multi-level switching. Student dining fixtures are in good condition, providing an average illumination of 55 FC, thus complying with the 50 FC recommended by the OSDM. No dedicated kitchen space or serving area is provided in the facility. The typical administrative spaces in the overall facility are equipped with LED lay-in trough type fixtures in good condition, providing adequate illumination based on OSDM requirements. The overall lighting systems of the facility are compliant with Ohio School Design Manual guidelines, except for the gymnasium space that has inadequate lighting levels.

Rating: 1 Satisfactory

Recommendations: Provide for replacement of lighting system in the gymnasium space due to inadequate lighting levels. 11-3-21 Update: After further investigation; light level in Gym is acceptable.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927)<br>32,543 ft² | (02) 1958 SW Addition (1958)<br>3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020)<br>7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| Sum: | | | $0.00 | $0.00 | $0.00 | $0.00 | | |

Lighting in gymnasium




Lighting in media center

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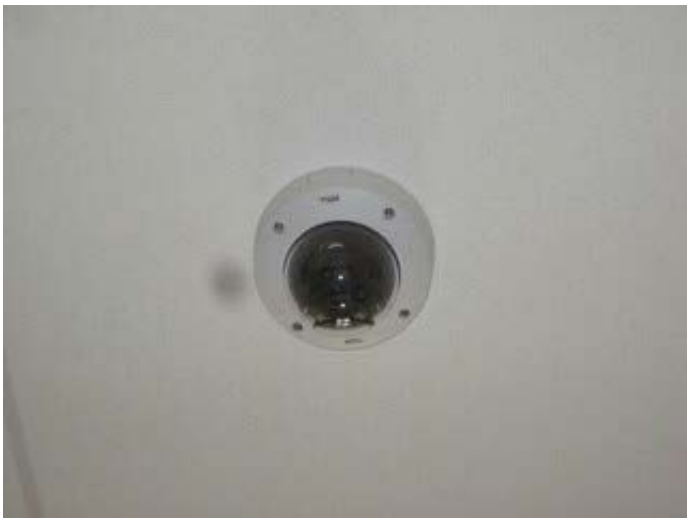
## L. Security Systems

Description: The overall facility contains a security system consisting of security cameras, door contacts, electric door strikes activated from a remote area and monitored by a security camera and door buzzer, and motion sensors. The existing security system is in excellent condition. The exterior security lighting consists of wall and pole mounted fixtures. Exterior security lighting is in excellent condition and provides adequate coverage.

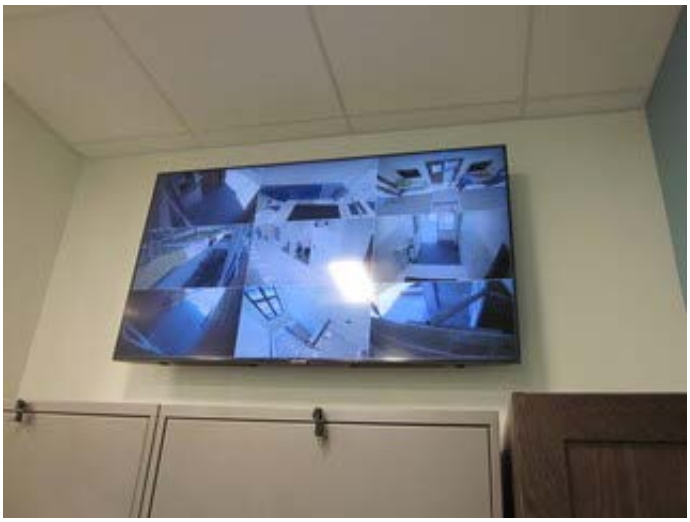
Rating: 2 Needs Repair

Recommendations: Provide additional building security systems as desired from the district to protect the building more thoroughly during school hours and after school hours. Provide security fencing, as desired by the district, to protect the building more thoroughly during school hours and after school hours, by allocating a portion of the comprehensive security systems funding provided in this Item L- Security Systems.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927) 32,543 ft² | (02) 1958 SW Addition (1958) 3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020) 7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| Partial Security System Upgrade: | $1.35 | sq.ft. (of entire building addition) | | Required | Required | Required | $57,707.10 | (complete, area of building) |
| Sum: | | | $57,707.10 | $43,933.05 | $4,198.50 | $9,575.55 | | |



Ceiling mounted security camera



Security camera monitor in main office

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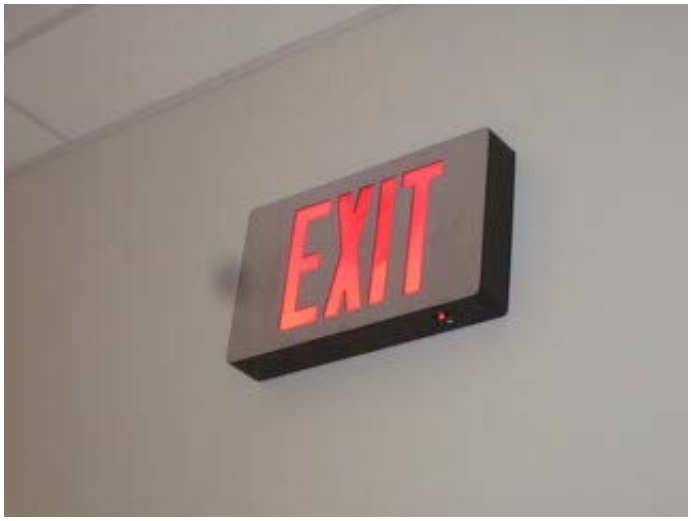
## M. Emergency/Egress Lighting

Description: The overall facility does contain an emergency/egress lighting system with battery back-up within each ceiling mounted fixture serving as both lighting and emergency lighting fixtures. The system is in excellent condition.

Rating: 1 Satisfactory

Recommendations: No work required.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927)<br>32,543 ft² | (02) 1958 SW Addition (1958)<br>3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020)<br>7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| Sum: | | | $0.00 | $0.00 | $0.00 | $0.00 | | |




Wall mounted exit signage

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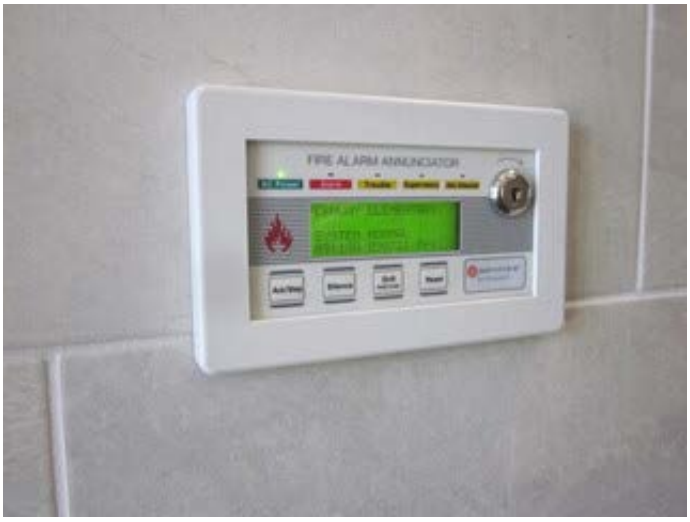
## N. Fire Alarm

Description: The overall facility contains a fire alarm system in excellent condition. Manual pull stations are mounted in corridors and assembly areas. Manual pull stations are mounted at exits. Horns and strobes are mounted in classrooms, corridors, assembly areas, and mechanical areas. Mechanical equipment does contain addressable automatic fire alarm devices as well as attic areas. The system does have additional zone capabilities. The system is adequately provided throughout the facility. The fire alarm system meets NFPA requirements and Ohio School Design Manual guidelines.

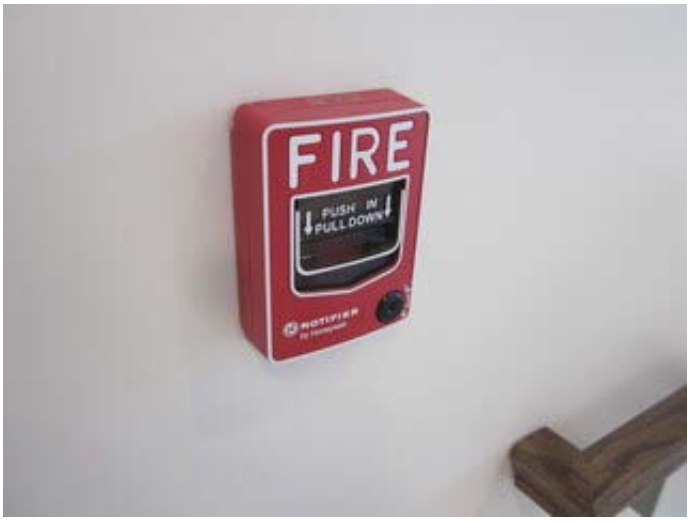
Rating: 1 Satisfactory

Recommendations: No work required.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927)<br>32,543 ft² | (02) 1958 SW Addition (1958)<br>3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020)<br>7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| Sum: | | | $0.00 | $0.00 | $0.00 | $0.00 | | |




Fire alarm annunciator panel




Fire alarm pull station

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## O. Handicapped Access

Description: Interior doors are equipped with ADA hardware. All interior doors provide required ADA clear spaces on push and pull sides of doors. Exterior entrances are ADA accessible. Exterior doors requiring ADA power assist hardware are equipped with ADA power assist hardware and are equipped with ADA hardware. Classroom doors are recessed and open outward. ADA signage is provided on the interior and is provided on the exterior of the building. Exterior walks along required accessible routes contain curbing. An ADA elevator is required and is provided. Electric water coolers and water bottle filling stations do meet ADA requirements. Toilet rooms do meet ADA requirements. Toilet room partitions do meet ADA requirements.

Rating: 1 Satisfactory

Recommendations: No work required.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927)<br>32,543 ft² | (02) 1958 SW Addition (1958)<br>3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020)<br>7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| Sum: | | | $0.00 | $0.00 | $0.00 | $0.00 | | |

Chair lift at main entry in 1927 original construction

Elevator in 2020 SE and 2nd Floor Media Addition

Back to Assessment Summary

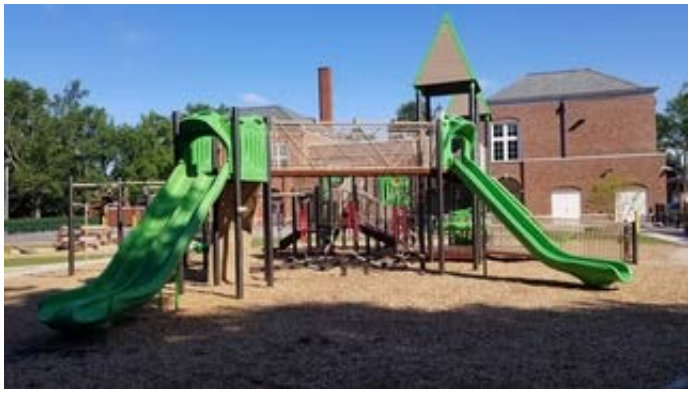
## P. Site Condition

Description: The 2.39 acre relatively flat site is located in an urban residential setting with large existing shade trees and generous landscaping. There are no apparent problems with erosion or ponding. The site is bordered by lightly traveled city streets. A single entrance onto the site does not facilitate proper separation of bus and other vehicular traffic, and one way bus traffic is not provided. There is a curbside bus loading and unloading zone in front of the school, which is not separated from other vehicular traffic. Staff and visitor parking is facilitated by an asphalt parking lot in good condition, containing 39 parking places, which provides adequate parking for staff members, and visitors. Parking for the disabled is adequately provided. The site and parking lot drainage design, consisting of catch basins, provides adequate evacuation of storm water, and no problems with parking lot ponding were observed. Concrete curbs in good condition are appropriately placed. Trash pick-up and service drive pavement appears to be heavy duty, is equipped with a concrete pad area for dumpsters, and is in good condition. Concrete sidewalks are properly sloped, are located to provide a logical flow of pedestrian traffic, and are in good condition. Railings at exterior area-ways does not meet code requirements for rail spacing. The playground equipment is in good condition, placed to provide compliant fall zones, and on a compliant soft surface of sufficient depth. A basketball court and hard surface place area are provided on asphalt pavement in good condition. No athletic facilities are provided on this site. Site features are suitable for outdoor instruction, which is enhanced through the District's provision of benches, picnic tables and exterior space within the playground area to facilitate doing so.

Rating: 2 Needs Repair

Recommendations: Provide for replacement of railings to meet code requirements. Provide site contingency allowances for unforeseen conditions. Provide for separated bus drop-off for elementary school.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927) 32,543 ft² | (02) 1958 SW Addition (1958) 3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020) 7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| Bus Drop-Off for Elementary | $110.00 | per student | | 228 Required | 21 Required | 51 Required | $33,000.00 | (**Number of students should be rounded up to the nearest 100.** $5500 per bus; 40 students per bus; 80% of elementary school students riding) |
| Exterior Hand / Guard Rails: | $43.00 | ln.ft. | | 90 Required | | | $3,870.00 | |
| Base Sitework Allowance for Unforeseen Circumstances | $50,000.00 | allowance | | Required | | | $50,000.00 | Include this and one of the next two. (Applies for whole building, so only **one** addition should have this item) |
| Sitework Allowance for Unforeseen Circumstances for buildings between 0 SF and 100,000 SF | $1.50 | sq.ft. (of entire building addition) | | Required | Required | Required | $64,119.00 | Include this one **or** the next. (Each addition should have this item) |
| Sum: | | | $150,989.00 | $127,764.50 | $6,975.00 | $16,249.50 | | |



Playground equipment

Exterior railings at 1927 original construction

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## Q. Sewage System

Description: Building is served by a municipal sanitary sewage system. District reports no problems with the sanitary sewage main.

Rating: 1 Satisfactory

Recommendations: No work required.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927)<br>32,543 ft² | (02) 1958 SW Addition (1958)<br>3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020)<br>7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| Sum: | | | $0.00 | $0.00 | $0.00 | $0.00 | | |

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## R. Water Supply

**Description:** Building water supply is provided from a municipal water supply. Water service main piping is non-galvanized. Domestic supply piping is non-galvanized. The water supply does contain a back flow preventer. The existing service does have adequate capacity and pressure for the current needs of the school's domestic water supply. The existing service does have adequate capacity and pressure for the needs of the school's current fire suppression system. District did not indicate domestic water service pressure problems. District did not report problems with water quality within this facility.

**Rating:** 2 Needs Repair

**Recommendations:** Provide funding for water quality testing.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927) 32,543 ft² | (02) 1958 SW Addition (1958) 3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020) 7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| Water Quality Test | $500.00 | allowance | | Required | | | $500.00 | (includes 2 tests) |
| Sum: | | | $500.00 | $500.00 | $0.00 | $0.00 | | |

Water service back-flow preventor

Water service meter pit

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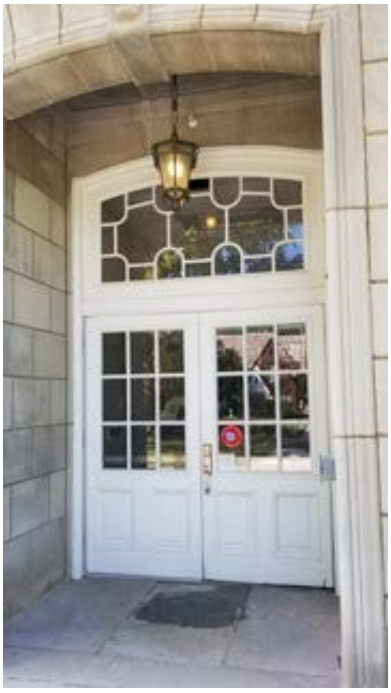
## S. Exterior Doors

Description: Typical exterior doors in the overall facility are composite type construction, installed on steel frames, and in good condition. Typical exterior doors feature insulated tempered glass vision panels. Entrance doors in the overall facility are composite type construction, installed on steel frames, and in good condition. Typical entrance doors feature single insulated tempered glass vision panels. Except for the main entrance doors to the school, which were restored for historical purposes, and are wood type construction, installed on wood frames, and in good condition. Main entrance doors feature single glazed wired glass vision panels. There are no overhead doors in the facility.

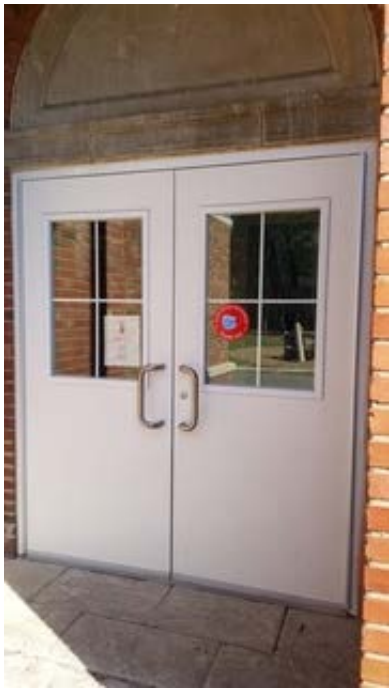
Rating: 1 Satisfactory

Recommendations: Existing conditions require no renovation or replacement at the present time. Main entrance doors are not being replaced due to historical significance of exterior door and glazing system.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927) 32,543 ft² | (02) 1958 SW Addition (1958) 3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020) 7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| Sum: | | | $0.00 | $0.00 | $0.00 | $0.00 | | |



Main entrance doors at 1927 original construction



Typical entrance doors

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## T. Hazardous Material

Description: The district did not provide the assessment team with a hazardous material report or summary. The building was completely gutted by the 2018 fire and completely renovated/rebuilt in 2019. It can be assumed the building is new as of 2019 and hazardous materials should not have been part of the renovation/rebuild materials. According to school district personnel, the site does not contain underground fuel tanks.

Rating: 1 Satisfactory

Recommendations: No work required. OFCC will engage the services of an independent Enhances Environmental Assessment (EEA) Consultant to perform and EEA to confirm scope and budget.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927) 32,543 ft² | (02) 1958 SW Addition (1958) 3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020) 7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| Sum: | | | $0.00 | $0.00 | $0.00 | $0.00 | | |

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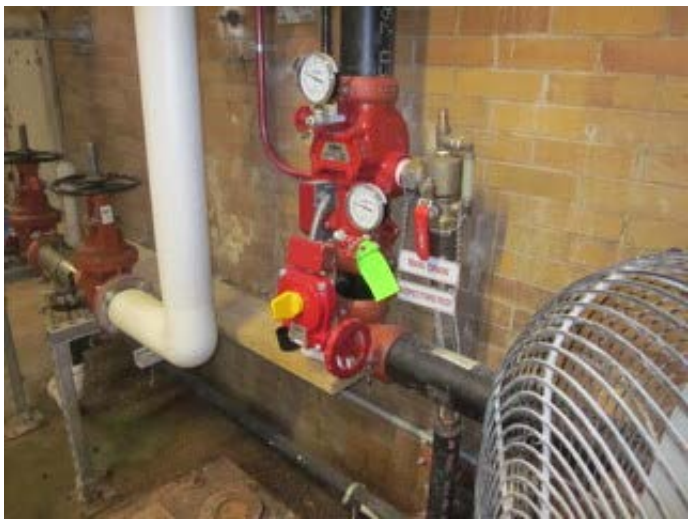
## U. Life Safety

Description: The overall facility does contain an automatic fire suppression system. The stairwells are not enclosed, nor required to be enclosed, and the handrails do meet requirements. The overall facility contains three (3) exterior stairways, at the public sidewalk, which are open and exposed to weather. The overall facility contains one (1) exterior stairway, from the lower-level mechanical space, which is open and exposed to weather. The existing facility does contain an emergency generator. The existing water main does provide adequate pressure and volume of water for current fire suppression system. There are an adequate number of fire extinguishers. Existing fire extinguishers are adequately spaced. Mounting heights of existing fire extinguishers meet ADA requirements.

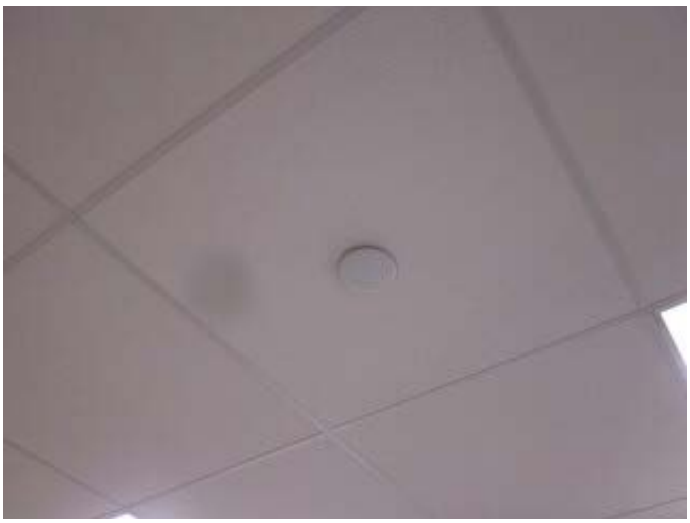
Rating: 1 Satisfactory

Recommendations: Provide stair enclosure at existing exterior stairway from lower-level mechanical space. 11-3-21 Update: Upon further review, the code does NOT require stair enclosure.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927)<br>32,543 ft² | (02) 1958 SW Addition (1958)<br>3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020)<br>7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| Sum: | | | $0.00 | $0.00 | $0.00 | $0.00 | | |



Fire suppression supply piping



Recessed ceiling mounted sprinkler head

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## V. Loose Furnishings

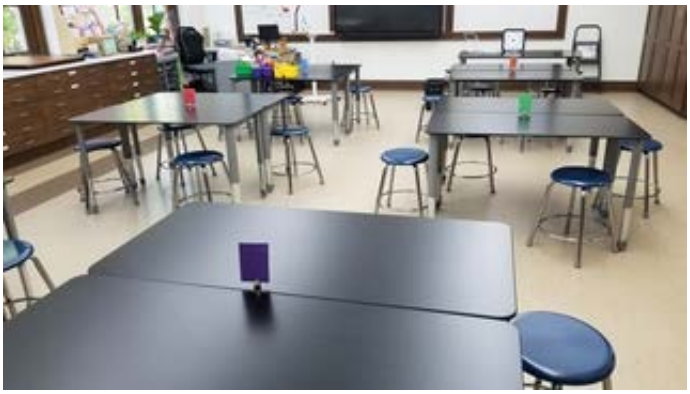
Description: The typical classroom furniture is of consistent design, and in generally good condition, consisting of student desks & chairs, teacher desks & chairs, file cabinets, reading table, computer workstation, bookcases, and wastebaskets. The facility's furniture and loose equipment were evaluated in item 6.17 in the CEFPI section of this report, and on a scale of 1 to 10 the overall facility received a rating of 9 due to observed conditions, and due to the fact that it lacks some of the Ohio School Design Manual required elements.

Rating: 1 Satisfactory

Recommendations: Existing conditions require no renovation or replacement at the present time.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927) 32,543 ft² | (02) 1958 SW Addition (1958) 3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020) 7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| CEFPI Rating 0 to 3 | $6.50 | sq.ft. (of entire building addition) | | Required | Required | Required | $277,849.00 | |
| Sum: | | | $277,849.00 | $211,529.50 | $20,215.00 | $46,104.50 | | |

Typical classroom furnishings



Furnishings in art room

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## W. Technology

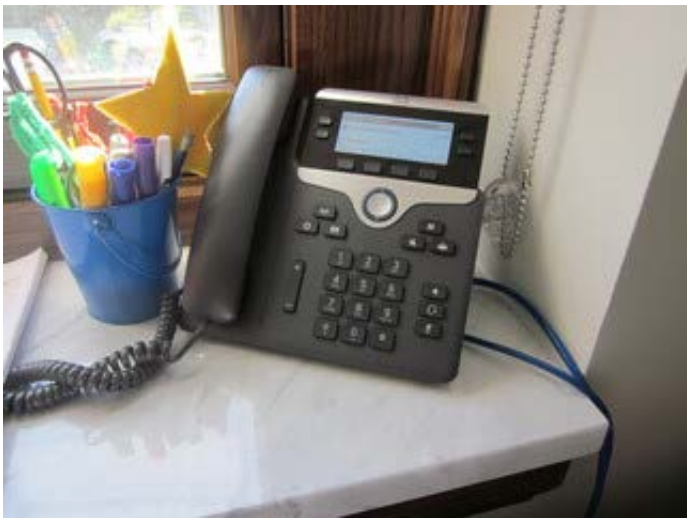
Description: The typical classroom is not equipped with four (4) technology data ports for student use as required by the Ohio School Design Manual. The existing facility contains 100% wireless capabilities. The instructor or teacher area is equipped with one (1) data port, one voice port and one cable port as required by the Ohio School Design Manual. The teaching stations provide through the telephone system for two-way communication to the administration area.

Rating: 2 Needs Repair

Recommendations: Provide partial technology upgrades, wiring and systems per Ohio School Design Manual guidelines and as desired by the district.

| Item | Cost | Unit | Whole Building | (01) 1927 Original Construction (1927) 32,543 ft² | (02) 1958 SW Addition (1958) 3,110 ft² | (03) 2020 SE and 2nd floor Media Addition (2020) 7,093 ft² | Sum | Comments |
|---|---|---|---|---|---|---|---|---|
| **Other:** Partial technology upgrades | $6.50 | sq.ft. (of entire building addition) | | Required | Required | Required | $277,849.00 | Provide partial technology upgrades, wiring and systems per Ohio School Design Manual guidelines and as desired by the district. |
| Sum: | | | $277,849.00 | $211,529.50 | $20,215.00 | $46,104.50 | | |

Interactive classroom monitors



Classroom telephone sets

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## X. Construction Contingency / Non-Construction Cost

| | | |
|---|---|---|
| **Renovation Costs (A-W)** | | $814,228.20 |
| 7.00% | Construction Contingency | $56,995.97 |
| **Subtotal** | | $871,224.17 |
| 16.29% | Non-Construction Costs | $141,922.42 |
| **Total Project** | | **$1,013,146.59** |

| | |
|---|---|
| Construction Contingency | $56,995.97 |
| Non-Construction Costs | $141,922.42 |
| **Total for X.** | **$198,918.39** |

| **Non-Construction Costs Breakdown** | | |
|---|---|---|
| Land Survey | 0.03% | $261.37 |
| Soil Borings / Phase I Envir. Report | 0.10% | $871.22 |
| Agency Approval Fees (Bldg. Code) | 0.25% | $2,178.06 |
| Construction Testing | 0.40% | $3,484.90 |
| Printing - Bid Documents | 0.15% | $1,306.84 |
| Advertising for Bids | 0.02% | $174.24 |
| Builder's Risk Insurance | 0.12% | $1,045.47 |
| Design Professional's Compensation | 7.50% | $65,341.81 |
| CM Compensation | 6.00% | $52,273.45 |
| Commissioning | 0.60% | $5,227.35 |
| Non-Construction Contingency (includes partnering and mediation services) | 1.12% | $9,757.71 |
| **Total Non-Construction Costs** | **16.29%** | **$141,922.42** |

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| | | | |
|---|---|---|---|
| **Name of Appraiser** | Bill Prenosil | **Date of Appraisal** | 2021-08-13 |
| **Building Name** | Fernway Elem | | |
| **Street Address** | 17420 Fernway Rd | | |
| **City/Town, State, Zip Code** | Shaker Heights, OH 44120 | | |
| **Telephone Number(s)** | (216) 295-4040 | | |
| **School District** | Shaker Heights City | | |

**Setting:** Urban

| | | | |
|---|---|---|---|
| Site-Acreage | 2.39 | Building Square Footage | 42,746 |
| Grades Housed | K-4 | Student Capacity | 342 |
| Number of Teaching Stations | 21 | Number of Floors | 3 |
| Student Enrollment | 266 | | |
| Dates of Construction | 1927,1958,2020 | | |

| | | | | |
|---|---|---|---|---|
| **Energy Sources:** | ☐ Fuel Oil | ☑ Gas | ☑ Electric | ☐ Solar |
| **Air Conditioning:** | ☑ Roof Top | ☐ Windows Units | ☑ Central | ☑ Room Units |
| **Heating:** | ☑ Central | ☑ Roof Top | ☐ Individual Unit | ☑ Forced Air |
| | ☑ Hot Water | ☐ Steam | | |

| **Type of Construction** | **Exterior Surfacing** | **Floor Construction** |
|---|---|---|
| ☑ Load bearing masonry | ☑ Brick | ☐ Wood Joists |
| ☐ Steel frame | ☐ Stucco | ☐ Steel Joists |
| ☑ Concrete frame | ☐ Metal | ☑ Slab on grade |
| ☐ Wood | ☐ Wood | ☑ Structural slab |
| ☐ Steel Joists | ☐ Stone | |

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Suitability Appraisal of **1.0 The School Site** for Fernway ES Assessment - Shaker Heights CSD - HPG 2021 with 11-3-21 update

| **1.0 The School Site** | Points Allocated | Points |
|---|---|---|
| 1.1 **Site is large enough** to meet educational needs as defined by state and local requirements | 25 | *5* |
| *The site is 2.39 acres compared to 13 acres required by the OSDM.* | | |
| 1.2 **Site is easily accessible** and conveniently located for the present and future population | 20 | *12* |
| *The school is centrally located within the school district, and is easily accessible. The site is accessible from city streets that are suitable for buses, cars, and service vehicles. One entry point is provided into the site, without appropriate separation of car and bus traffic.* | | |
| 1.3 **Location** is removed from undesirable business, industry, traffic, and natural hazards | 10 | *8* |
| *The site is adjacent to residential uses, and there are no undesirable features adjacent to the school site.* | | |
| 1.4 Site is **well landscaped and developed** to meet educational needs | 10 | *8* |
| *The site is moderately landscaped with mature shade trees which define the property and emphasize the building entrance. Lawn areas where mowing is required do not exceed 3:1 slope.* | | |
| 1.5 ES Well equipped **playgrounds are separated** from streets and parking areas<br>MS Well equipped **athletic and intermural areas are separated** from streets and parking<br>HS Well equipped **athletic areas** are adequate with sufficient solid-surface parking | 10 | *10* |
| *Playground areas consist of metal type play equipment, which is in good condition, and is located on wood fiber mulch which is an approved soft surface material. Play equipment is ADA accessible, and includes an accessible route to equipment. Fencing is provided to contain students within the play area, which is in good condition, and provides proper separation of play areas from vehicular use areas.* | | |
| 1.6 **Topography** is varied enough to provide desirable appearance and without steep inclines | 5 | *4* |
| *The site is relatively flat with slopes for positive drainage, and is desirable.* | | |
| 1.7 Site has stable, well drained **soil free of erosion** | 5 | *4* |
| *Soils appear to be stable and well drained, and no erosion was observed.* | | |
| 1.8 Site is suitable for **special instructional needs**, e.g., outdoor learning | 5 | *4* |
| *The site has been developed to accommodate outdoor learning, including benches and picnic tables to facilitate instruction.* | | |
| 1.9 **Pedestrian services** include adequate sidewalk with designated crosswalks, curb cuts, and correct slopes | 5 | *4* |
| *Sidewalks are adequately provided to accommodate safe pedestrian circulation including designated crosswalks, curb cuts, and correct slopes.* | | |
| 1.10 ES/MS Sufficient **on-site, solid surface parking** for faculty and staff is provided<br>HS Sufficient **on-site, solid surface parking** is provided for faculty, students, staff and community | 5 | *4* |
| *Adequate parking is provided for faculty, staff, and community events, and is located on asphalt pavement in good condition.* | | |
| **TOTAL - 1.0 The School Site** | 100 | *63* |

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Suitability Appraisal of **2.0 Structural and Mechanical Features** for Fernway ES Assessment - Shaker Heights CSD - HPG 2021 with 11-3-21 update

| **2.0 Structural and Mechanical Features** | Points Allocated | Points |
|---|---|---|
| **Structural** | | |
| 2.1 Structure meets all **barrier-free** requirements both externally and internally | 15 | *15* |
| *Entire building meets all ADA requirements.* | | |
| 2.2 **Roofs** appear sound, have positive drainage, and are weather tight | 15 | *15* |
| *Roofs are in great condition after replacement in 2020.* | | |
| 2.3 **Foundations** are strong and stable with no observable cracks | 10 | *8* |
| *Foundations are in good condition with no cracking or settling observed.* | | |
| 2.4 **Exterior and interior walls** have sufficient expansion joints and are free of deterioration | 10 | *8* |
| *Expansion joints have been sufficiently provided throughout the building.* | | |
| 2.5 **Entrances and exits** are located so as to permit efficient student traffic flow | 10 | *10* |
| *Exits are properly located to allow safe egress from the building.* | | |
| 2.6 **Building ''envelope''** generally provides for energy conservation (see criteria) | 10 | *7* |
| *Building wall envelope contains minimal insulation from original construction which provides for energy conservation. Building wall envelope in 1927 original construction and 1958 addition contains minimal insulation.* | | |
| 2.7 Structure is **free of friable asbestos** and **toxic materials** | 10 | *10* |
| *The district did not provide the assessment team with a hazardous material report or summary. The building was completely gutted by the 2018 fire and completely renovated/rebuilt in 2019. It can be assumed the building is new as of 2019 and hazardous materials should not have been part of the renovation/rebuild materials. According to school district personnel, the site does not contain underground fuel tanks.* | | |
| 2.8 Interior walls permit sufficient **flexibility** for a variety of class sizes | 10 | *6* |
| *Interior walls throughout the facility are fixed walls and are not flexible.* | | |
| **Mechanical/Electrical** | Points Allocated | Points |
| 2.9 **Adequate light sources** are well maintained, and properly placed and are not subject to overheating | 15 | *12* |
| *Light sources are properly placed, well maintained, and provide adequate lighting in most areas. Light fixtures do not appear to be subject to overheating.* | | |
| 2.10 **Internal water supply** is adequate with sufficient pressure to meet health and safety requirements | 15 | *15* |
| *Municipal water supply is adequate for current domestic and current fire suppression requirements and contains a backflow preventer.* | | |
| 2.11 Each teaching/learning area has adequate convenient **wall outlets**, phone and computer cabling for technology applications | 15 | *15* |
| *Classrooms have adequate electrical outlets and data jacks for technology applications.* | | |
| 2.12 **Electrical controls** are safely protected with **disconnect switches** easily accessible | 10 | *10* |
| *All electrical devices are equipped with disconnects within view of item served.* | | |
| 2.13 **Drinking fountains** are adequate in number and placement, and are properly maintained including provisions for the disabled | 10 | *10* |
| *Drinking fountains and water bottle fillers are adequate in number and placement, and meet ADA requirements. Drinking fountains and water bottle fillers are properly maintained.* | | |
| 2.14 Number and size of **restrooms meet requirements** | 10 | *10* |
| *The number and size of restrooms meet requirements.* | | |

| | | |
|---|---|---|
| 2.15 **Drainage systems** are properly maintained and meet requirements | 10 | *10* |
| *District reports no problems with sanitary system.* | | |
| 2.16 **Fire alarms, smoke detectors, and sprinkler systems** are properly maintained and meet requirements | 10 | *10* |
| *The facility is fully sprinkled. Fire alarm systems are provided with required devices. Smoke detectors are adequately provided.* | | |
| 2.17 **Intercommunication system** consists of a central unit that allows dependable **two-way communication** between the office and instructional areas | 10 | *10* |
| *Two way communication is provided by telephone sets in the classrooms.* | | |
| 2.18 **Exterior water supply** is sufficient and available for normal usage | 5 | *5* |
| *There are sufficient exterior hose bibs for exterior maintenance.* | | |
| **TOTAL - 2.0 Structural and Mechanical Features** | 200 | *186* |

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Suitability Appraisal of **3.0 Plant Maintainability** for Fernway ES Assessment - Shaker Heights CSD - HPG 2021 with 11-3-21 update

| **3.0 Plant Maintainability** | Points Allocated | Points |
|---|---|---|
| 3.1 **Windows, doors, and walls** are of material and finish requiring minimum maintenance | 15 | *12* |
| *Wood framed, aluminum clad windows are in good condition, and are easily maintained.* | | |
| 3.2 **Floor surfaces** throughout the building require minimum care | 15 | *12* |
| *Flooring throughout the facility consists of vinyl tile, carpet, terrazzo tile, ceramic tile, and hardwood, which was mostly replaced in 2020, and is in good condition.* | | |
| 3.3 **Ceilings and walls** throughout the building, including service areas, are easily cleaned and resistant to stain | 10 | *8* |
| *Finishes throughout the facility have been well designed to accommodate cleaning and stain resistance.* | | |
| 3.4 **Built-in equipment** is designed and constructed for ease of maintenance | 10 | *10* |
| *Casework is wood type construction with plastic laminate tops, is well constructed and in good condition.* | | |
| 3.5 **Finishes and hardware**, with compatible keying system, are of durable quality | 10 | *10* |
| *Door hardware is consistent throughout the facility, and meets ADA requirements.* | | |
| 3.6 **Restroom fixtures** are wall mounted and of quality finish | 10 | *10* |
| *Fixtures are wall mounted and are of good quality.* | | |
| 3.7 Adequate **custodial storage space** with water and drain is accessible throughout the building | 10 | *2* |
| *Custodial spaces are not provided adjacent to most restrooms.* | | |
| 3.8 Adequate **electrical outlets and power**, to permit routine cleaning, are available in every area | 10 | *10* |
| *Electrical outlets are adequately provided in all locations to allow for convenient routine cleaning.* | | |
| 3.9 **Outdoor light fixtures, electrical outlets**, equipment, and other fixtures are accessible for repair and replacement | 10 | *10* |
| *Outdoor light fixtures are adequately provided, and are accessible for repair and replacement. Electrical outlets are adequately provided around the exterior of the facility.* | | |
| **TOTAL - 3.0 Plant Maintainability** | 100 | *84* |

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Suitability Appraisal of **4.0 Building Safety and Security** for Fernway ES Assessment - Shaker Heights CSD - HPG 2021 with 11-3-21 update

| **4.0 Building Safety and Security** | Points Allocated | Points |
|---|---|---|
| **Site Safety** | | |
| 4.1 **Student loading areas** are segregated from other vehicular traffic and pedestrian walkways | 15 | *3* |
| *Student loading is not separated from other vehicular traffic.* | | |
| 4.2 **Walkways**, both on and offsite, are available for safety of pedestrians | 10 | *8* |
| *Walkways are adequately provided both on and off-site for pedestrian safety.* | | |
| 4.3 **Access streets** have sufficient signals and signs to permit safe entrance to and exit from school area | 5 | *4* |
| *School signs and signals are located as required on adjacent access streets.* | | |
| 4.4 **Vehicular entrances and exits** permit safe traffic flow | 5 | *3* |
| *No on-site bus loading and unloading zone is provided on the site. The parking lot has one entrance and exit from the site.* | | |
| 4.5 ES **Playground equipment** is free from hazard<br>MS Location and types of **intramural equipment** are free from hazard<br>HS **Athletic field equipment** is properly located and is free from hazard | 5 | *5* |
| *Playground equipment is new in 2020, is in good condition and free from hazard.* | | |

| **Building Safety** | Points Allocated | Points |
|---|---|---|
| 4.6 **The heating unit(s)** is located away from student occupied areas | 20 | *20* |
| *Heating systems are located on the areas that are not accessible by students.* | | |
| 4.7 Multi-story buildings have at least **two stairways** for student egress | 15 | *15* |
| *The building has multiple stairways which are ADA and OBC compliant.* | | |
| 4.8 **Exterior doors** open outward and are equipped with panic hardware | 10 | *8* |
| *Exterior doors are properly equipped with panic hardware and open outward.* | | |
| 4.9 **Emergency lighting** is provided throughout the entire building with exit signs on separate electrical circuits | 10 | *10* |
| *Emergency lighting is provided through ceiling mounted fixtures and does provide adequate lighting levels.* | | |
| 4.10 **Classroom doors** are recessed and open outward | 10 | *10* |
| *Classroom doors are adequately recessed with proper ADA clearances, and open outward.* | | |
| 4.11 **Building security systems** are provided to assure uninterrupted operation of the educational program | 10 | *10* |
| *Motion sensors, security cameras, and door contacts are provided throughout interior and exterior of building. Security cameras are provided throughout exterior of building.* | | |
| 4.12 **Flooring** (including ramps and stairways) is maintained in a non-slip condition | 5 | *4* |
| *Terrazzo tile and vinyl tile flooring has been well maintained throughout the facility.* | | |
| 4.13 **Stair risers** (interior and exterior) do not exceed 6 1/2 inches and range in number from 3 - 16 | 5 | *5* |
| *Stair treads and risers are properly designed and meet requirements.* | | |
| 4.14 **Glass** is properly located and protected with wire or safety material to prevent accidental student injury | 5 | *4* |
| *Glass at door transoms and sidelights is tempered or provided with a wire mesh for safety.* | | |
| 4.15 **Fixed Projections** in the traffic areas do not extend more than eight inches from the corridor wall | 5 | *4* |

*Drinking fountains / water coolers have been recessed in the corridor wall.*

| | | |
|---|---|---|
| 4.16 **Traffic areas** terminate at an exit or a stairway leading to an egress | 5 | *5* |

*All traffic areas terminate at an exit or egress stair.*

| **Emergency Safety** | Points Allocated | Points |
|---|---|---|
| 4.17 Adequate **fire safety equipment** is properly located | 15 | *15* |

*The facility is sprinkled. Fire alarm devices are adequately provided. Fire extinguishers are adequately provided.*

| | | |
|---|---|---|
| 4.18 There are at least **two independent exits** from any point in the building | 15 | *15* |

*Every area contains at least two independent exits.*

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|---|---|---|
| 4.19 **Fire-resistant materials** are used throughout the structure | 15 | *15* |

*Masonry block and steel stud framing have been used throughout the facility.*

| | | |
|---|---|---|
| 4.20 Automatic and manual **emergency alarm system** with a distinctive sound and flashing light is provided | 15 | *15* |

*The fire alarm is provided with manual and automatic actuation, and is provided with visual indicating devices in all required areas.*

| | | |
|---|---|---|
| **TOTAL - 4.0 Building Safety and Security** | 200 | *178* |

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Suitability Appraisal of **5.0 Educational Adequacy** for Fernway ES Assessment - Shaker Heights CSD - HPG 2021 with 11-3-21 update

| **5.0 Educational Adequacy** | Points Allocated | Points |
|---|---|---|
| **Academic Learning Space** | | |
| 5.1 **Size of academic learning areas** meets desirable standards | 25 | *23* |
| *The average classroom is 850 SF compared to 900 SF required by the OSDM.* | | |
| 5.2 **Classroom space** permits arrangements for small group activity | 15 | *13* |
| *Classrooms are large enough to allow effective small group activity spaces.* | | |
| 5.3 **Location of academic learning areas** is near related educational activities and away from disruptive noise | 10 | *7* |
| *The gymnasium is located adjacent to academic learning areas, which can be distracting. The music room is properly isolated from the academic learning areas to reduce distractions.* | | |
| 5.4 **Personal space** in the classroom away from group instruction allows privacy time for individual students | 10 | *9* |
| *Classrooms are large enough to allow privacy time for individual students.* | | |
| 5.5 **Storage for student materials** is adequate | 10 | *8* |
| *Lockers, located in the corridor, are adequately provided for student storage.* | | |
| 5.6 **Storage for teacher materials** is adequate | 10 | *8* |
| *Casework is adequately provided for storage of teacher materials.* | | |
| **Special Learning Space** | Points Allocated | Points |
| 5.7 **Size of special learning area(s)** meets standards | 15 | *12* |
| *Special education classrooms are undersized compared to standards.* | | |
| 5.8 **Design of specialized learning area(s)** is compatible with instructional need | 10 | *10* |
| *Special education spaces are properly designed to meet instructional needs.* | | |
| 5.9 **Library**/**Resource**/**Media Center** provides appropriate and attractive space | 10 | *8* |
| *The media center is an attractive space and sufficient book storage space for student population.* | | |
| 5.10 **Gymnasium (or covered P.E. area)** adequately serves physical education instruction | 5 | *3* |
| *The gymnasium is 2,329 SF compared to 3,500 SF recommended in the OSDM.* | | |
| 5.11 ES **Pre-kindergarten and kindergarten space** is appropriate for age of students and nature of instruction<br>MS/HS **Science** program is provided sufficient space and equipment | 10 | *9* |
| *Kindergarten spaces are adequate for age of students served.* | | |
| 5.12 **Music Program** is provided adequate sound treated space | 5 | *5* |
| *The music room is designed appropriately, including acoustic panels on walls and ceilings.* | | |
| 5.13 **Space for art** is appropriate for special instruction, supplies, and equipment | 5 | *5* |
| *The art room is appropriately designed for instruction and includes sufficient space for storage of supplies and equipment.* | | |
| **School Facility Appraisal** | Points Allocated | Points |
| 5.14 **Space for technology education** permits use of state-of-the-art equipment | 5 | |
| *The facility is not provided with computer labs for student use.* | | |

| | | |
|---|---|---|
| 5.15 Space for **small groups and remedial instruction** is provided adjacent to classrooms | 5 | |
| *No spaces have been provided adjacent to classrooms for small groups or remedial instruction.* | | |
| 5.16 **Storage for student and teacher material** is adequate | 5 | *4* |
| *Lockers, located in the corridor, are adequately provided for student storage. Casework is adequately provided for storage of teacher materials.* | | |

| **Support Space** | Points Allocated | Points |
|---|---|---|
| 5.17 **Teacher's lounge and work areas** reflect teachers as professionals | 10 | *10* |
| *The teacher's lounge is adequately provided.* | | |
| 5.18 **Cafeteria**/**Kitchen** is attractive with sufficient space for seating/dining, delivery, storage, and food preparation | 10 | *3* |
| *The facility does not contain a kitchen space.* | | |
| 5.19 **Administrative offices** provided are consistent in appearance and function with the maturity of the students served | 5 | *5* |
| *Administrative offices are attractive and reflect a professional environment for school students.* | | |
| 5.20 **Counselor's office** insures privacy and sufficient storage | 5 | *5* |
| *Counselor's space is adequately separated from other spaces and provides for private conversations.* | | |
| 5.21 **Clinic** is near administrative offices and is equipped to meet requirements | 5 | *5* |
| *Clinic is located within administrative space.* | | |
| 5.22 **Suitable reception space** is available for students, teachers, and visitors | 5 | *5* |
| *Reception space is large enough for population served.* | | |
| 5.23 **Administrative personnel** are provided **sufficient work space and privacy** | 5 | *5* |
| *Administrative spaces are large enough and provide privacy*. | | |
| **TOTAL - 5.0 Educational Adequacy** | 200 | *162* |

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Suitability Appraisal of **6.0 Environment for Education** for Fernway ES Assessment - Shaker Heights CSD - HPG 2021 with 11-3-21 update

| **6.0 Environment for Education** | Points Allocated | Points |
|---|---|---|
| **Exterior Environment** | | |
| 6.1 Overall **design is aesthetically pleasing** to age of students | 15 | *15* |
| *The building is a traditional design with classical detailing, which is aesthetically pleasing.* | | |
| 6.2 Site and building are **well landscaped** | 10 | *10* |
| *The site is moderately landscaped with mature shade trees, which define the property and emphasize the building entrance. Lawn areas where mowing is required do not exceed 3:1 slope.* | | |
| 6.3 **Exterior noise and poor environment** do not disrupt learning | 10 | *8* |
| *The site is adjacent to residential uses, and there are no undesirable features adjacent to the school site.* | | |
| 6.4 **Entrances and walkways** are **sheltered** from sun and inclement weather | 10 | *5* |
| *The main entrance to the school is partially sheltered.* | | |
| 6.5 **Building materials** provide attractive color and texture | 5 | *5* |
| *Exterior building materials consist of brick and stone which does provide an attractive color and texture.* | | |
| **Interior Environment** | Points Allocated | Points |
| 6.6 **Color schemes, building materials, and decor** provide an impetus to learning | 20 | *18* |
| *The use of repeated colors and materials gives the building some unity and a sense of consistency, which enhances the learning environment.* | | |
| 6.7 **Year around comfortable temperature and humidity** are provided throughout the building | 15 | *15* |
| *The facility is air conditioned to provide year-round temperature and humidity control.* | | |
| 6.8 **Ventilating system** provides adequate quiet circulation of clean air and meets 15cfm VBC requirement | 15 | *15* |
| *The ventilating systems provide the required volume of ventilation air to the spaces. Ventilation systems introduce no noise into the teaching and learning areas.* | | |
| 6.9 **Lighting system** provides proper intensity, diffusion, and distribution of illumination | 15 | *8* |
| *The lighting system provides proper intensity in most areas. Location of lighting fixtures provides even distribution of illumination. Diffusion of illumination is adequately provided by the light fixture lenses. Lighting levels in the gymnasium did not meet OSDM guidelines.* | | |
| 6.10 **Drinking fountains and restroom facilities** are conveniently located | 15 | *15* |
| *Drinking fountains, bottle fillers, and restroom facilities are conveniently located.* | | |
| 6.11 **Communication among students** is enhanced by commons area(s) for socialization | 10 | *10* |
| *There are areas for students to gather in the multi-use area and gymnasium. Outdoor play and green space areas have been provided to encourage socialization and communication among students.* | | |
| 6.12 **Traffic flow** is aided by appropriate foyers and corridors | 10 | *10* |
| *Corridors and foyers are adequately designed for efficient traffic flow.* | | |
| 6.13 **Areas for students to interact** are suitable to the age group | 10 | *10* |
| *There are areas for students to interact in the multi-use area and gymnasium. Outdoor play and green space areas have been provided to encourage socialization and communication among students.* | | |
| 6.14 **Large group areas are designed** for effective management of students | 10 | *10* |
| *The gymnasium is adequately designed to manage large groups of students. The gymnasium contains and exterior exit directly to outdoor spaces for effective management of students.* | | |

| | | |
|---|---|---|
| 6.15 **Acoustical treatment** of ceilings, walls, and floors provides effective sound control | 10 | *8* |
| *Ceilings, walls, and floors have been adequately designed and provided with effective sound control measures.* | | |
| 6.16 **Window design** contributes to a pleasant environment | 10 | *10* |
| *The windows are fairly well designed to contribute to a pleasant environment.* | | |
| 6.17 **Furniture and equipment** provide a pleasing atmosphere | 10 | *9* |
| *Classroom furniture is consistent in design and in good condition.* | | |
| **TOTAL - 6.0 Environment for Education** | 200 | *181* |

# *LEED Observation Notes*

| | |
|---|---|
| **School District:** | Shaker Heights City |
| **County:** | Cuyahoga |
| **School District IRN:** | 44750 |
| **Building:** | Fernway Elem |
| **Building IRN:** | 11536 |

**Sustainable Sites**

*Construction process can have a harmful effect on local ecology, especially when buildings are build on productive agricultural, wildlife or open areas. Several measures can be take however to prevent the impact on undeveloped lands or to improve previously contaminated sites. Appropriate location reduces the need for private transportation and helps to prevent an increase in air pollution. Developing buildings in urban areas and on brownfield sites instead of greenfield locations has economical and environmental benefits. Controlling stormwater runoff and erosion can prevent the worsening of water quality in receiving bodies of water and the impact on aquatic life. Once the building is constructed, it's important to decrease heat island effects and reduce the light pollution on the site.*

(source: LEED Reference Guide, 2001:9)

CHALLENGES: Create public transportation when available. Provide high efficiency vehicle only parking. Provide bicycle racks. Reduce blacktop areas and provide impervious paving materials. Maximize open green spaces. Provide vegetated roof areas when possible. Store rainwater for irrigation and water use purposes. SSp1: PREREQUISISTE - Construction Activity Pollution Prevention Create an Erosion and Sedimentation Control Plan during the design phase of the project. Consider employing strategies such as temporary and permanent seeding, mulching, earth dikes, silt fencing, sediment traps and sediment basins. SSc1: Site Selection Not Applicable with existing sites. SSc2: Development Density & Community Connectivity Not Applicable with existing sites. SSc3: Brownfield Redevelopment Not Applicable with existing sites. SSc4.1: Alternative Transportation, Public Transportation Access Not Applicable with existing sites. SSc4.2: Alternative Transportation, Bicycle Storage & Changing Rooms Design the building renovation with transportation amenities such as bicycle racks and showering/changing facilities. SSc4.3: Alternative Transportation, Low-Emitting & Fuel-Efficient Vehicles Design and provide transportation amenities such as alternative fuel refueling stations. Consider sharing the costs and benefits of refueling stations with neighbors. SSc4.4: Alternative Transportation, Parking Capacity Consider minimizing parking lot/garage size. Consider sharing parking facilities with adjacent buildings and or alternatives that will limit the use of single occupancy vehicles. SSc5.1: Site Development, Protect or Restore Habitat Carefully site any potential building additions to minimize disruption to existing ecosystems and design the addition to minimize its footprint. Strategies include stacking the building program, tuck-under parking and sharing facilities with neighbors. Establish clearly marked construction boundaries to minimize disturbance of the existing site and restore previously degraded areas to their natural state. Design appropriate native or adapted plant materials and prohibit plant materials listed as invasive or noxious weed species. Native/adapted plants require minimal or no irrigation following establishment, do not require active maintenance such as mowing or chemical inputs such as fertilizers, pesticides or herbicides, and provide habitat value and promote biodiversity through avoidance of monoculture plantings. SSc5.2: Site Development, Maximize Open Space Select a suitable building location and design potential additions with a minimal footprint to minimize site disruption. Strategies include stacking the building program, tuck-under parking and sharing facilities with neighbors to maximize open space on the site. SSc6.1: Stormwater Management, Quantity Control Design any potential addition to maintain natural stormwater flows by promoting infiltration. Specify vegetated roofs, pervious paving, and other measures to minimize impervious surfaces. Reuse stormwater volumes generated for non-potable uses such as landscape irrigation, toilet and urinal flushing and custodial uses. SSc6.2: Stormwater Management, Quality Control Use alternative surfaces (e.g., vegetated roofs, pervious pavement or grid pavers) and nonstructural techniques (e.g., rain gardens, vegetated swales, disconnection of imperviousness, rainwater recycling) to reduce imperviousness and promote infiltration, thereby reducing pollutant loadings. Use sustainable design strategies to design integrated natural and mechanical treatment systems such as constructed wetlands, vegetated filters, and open channels to treat stormwater runoff. SSc7.1: Heat Island Effect, Non-Roof 1 point Shade new constructed surfaces on the site with landscape features and utilize high-reflectance materials for hardscape. Consider replacing constructed surfaces (i.e., roof, roads, sidewalks, etc.) with vegetated surfaces such as vegetated roofs and open grid paving or specify high-albedo materials to reduce the heat absorption. SSc7.2: Heat Island Effect, Roof 1 point Consider installing high-albedo and vegetated roofs on existing building and any potential addition(s) to reduce heat absorption.

**Water Efficiency**

*In the US ca. 340 billion gallons of fresh water are withdrawn daily from surface sources, 65% of which is discharged later after use. Water is also withdrawn from underground aquifers The excessive usage of water results in the current water deficit, estimated at 3,700 billion gallons. Water efficiency measures in commercial buildings can reduce water usage by at least 30%. Low-flow fixtures, sensors or using non potable water for landscape irrigation, toilet flushing and building systems are just some of available strategies. Not only do they result in environmental savings, but also bring about financial benefits, related to lower water use fees, lower sewage volumes to treat and energy use reductions.*

(source: LEED Reference Guide, 2001:65)

CHALLENGES: Install water efficient landscaping. Store and use rainwater for any required irrigation. Provide high efficiency plumbing fixtures. Provide water use reduction strategies when possible. WEc1.1: Water Efficient Landscaping: Reduce by 50% On sites containing a potential addition/renovation(s) perform a soil/climate analysis to determine appropriate plant material and design the landscape with native or adapted plants to reduce or eliminate irrigation requirements. Where irrigation is required, use high-efficiency equipment and/or climate-based controllers. WEc1.2: Water Efficient Landscaping: No Potable Water Use or No Irrigation On sites containing a potential addition/renovation(s) perform a soil/climate analysis to determine appropriate landscape types and design the landscape with indigenous plants to reduce or eliminate irrigation requirements. Consider using stormwater, graywater, and/or condensate water for irrigation. WEc2: Innovative Wastewater Technologies Design any potential addition/renovation(s) specifying high-efficiency fixtures and dry fixtures such as composting toilet systems and non-water using urinals to reduce wastewater volumes. Consider reusing stormwater or graywater for sewage conveyance or on-site wastewater treatment systems (mechanical and/or natural). Options for on-site wastewater treatment include packaged biological nutrient removal systems, constructed wetlands, and high efficiency filtration systems. WEc3.1: Water Use Reduction: 20% Design any potential addition/renovation(s) using high-efficiency fixtures, dry fixtures such as composting toilet systems and nonwater using urinals, and occupant sensors to reduce the potable water demand. Consider reuse of stormwater and graywater for non-potable applications such as toilet and urinal flushing and custodial uses. WEc3.2: Water Use Reduction: 30% Design any potential addition/renovation(s) using high-efficiency fixtures, dry fixtures such as composting toilets and waterless urinals, and occupant sensors to reduce the potable water demand. Consider reuse of stormwater and graywater for non-potable applications such as toilet and urinal flushing, mechanical systems and custodial uses.

**Energy & Atmosphere**

*Buildings in the US account for more than 30% of the total energy use and for approximately 60% of electricity. 75% of energy is derived from the burning of fossil fuels, which releases CO2 into the Atmosphere and contributes to global warming. Moreover, coal fired electric utilities release nitrogen oxides and sulfur dioxide, where the former contribute to smog and the latter to acid rain. Other types of energy production are not less harmful. Burning of natural gas produces nitrogen oxides and greenhouse gases as well, nuclear power creates nuclear wastes, while hydroelectric generating plants disrupt natural water flows. Luckily there are several practices that can reduce energy consumption and are environmentally and economically beneficial. Not only will they reduce the air pollution and mitigate global warming thanks to being less dependent on power plants, but also they will reduce operational costs and will quickly pay back. In order to make the most of those practices, it's important to adopt a holistic approach to the building's energy load and integrate different energy saving strategies.*

(source: LEED Reference Guide, 2001:93)

CHALLENGES: Commission all building systems during any construction activities. Design and monitor performance of energy consumption and performance. Provide green power solutions where possible. EAp1: Fundamental Commissioning of the Building Energy Systems Design any potential building addition/renovation with a commissioning process completed for the following energy-related systems: 1 Heating, ventilating, air conditioning and refrigeration (HVAC&R) systems (mechanical and passive) and associated controls. 2 Lighting and daylighting controls. 3 Domestic hot water systems. 4 Renewable energy systems (wind, solar, etc.). EAp2: Minimum Energy Performance Design any potential building addition/renovation to comply with both the mandatory provisions (Sections 5.4, 6.4, 7.4, 8.4, 9.4 and 10.4) of ASHRAE/IESNA Standard 90.1-2004; and the prescriptive requirements (Sections 5.5, 6.5, 7.5 and 9.5) or performance requirements (Section 11) of ASHRAE/IESNA Standard 90.1-2004. EAp3: Fundamental Refrigerant Management When reusing existing HVAC systems in any potential building addition/renovation, conduct an inventory to identify equipment that uses CFC refrigerants and provide a replacement schedule for these refrigerants. For any additions, specify new HVAC equipment that uses no CFC refrigerants. EAc1: Optimize Energy Performance Design/redesign the existing building envelope and systems to maximize energy performance. Use a computer simulation model to assess the energy performance and identify the most cost-effective energy efficiency measures. Quantify energy performance as compared to a baseline building. EAc2: On-Site Renewable Energy Assess any potential building addition/renovation for non-polluting and renewable energy potential including solar, wind, geothermal, low-impact hydro, biomass and bio gas strategies. When applying these strategies, take advantage of net metering with the local utility. EAc3: Enhanced Commissioning Provide enhanced commissioning in any potential building addition/renovation to include fundamental commissioning as well as a Commissioning design review, Commissioning submittal review, and Systems manual. EAc4: Enhanced Refrigerant Management In any potential building addition/renovation where mechanical cooling is used, utilize base building HVAC and refrigeration systems for the refrigeration cycle that minimizes direct impact on ozone depletion and global warming. Select HVAC&R equipment with reduced refrigerant charge and increased equipment life. Maintain equipment to prevent leakage of refrigerant to the atmosphere. Utilize fire suppression systems that do not contain HCFCs or Halons. EAc5: Measurement &Verification In any potential building addition/renovation develop an M&V Plan to evaluate building and/or energy system performance. Characterize the building and/or energy systems through energy simulation or engineering analysis. Install the necessary metering equipment to measure energy use. Track performance by comparing predicted performance to actual performance, broken down by component or system as appropriate. Evaluate energy efficiency by comparing actual performance to baseline performance. EAc6: Green Power In any potential building addition/renovation determine the energy needs of the building and investigate opportunities to engage in a green power contract. Green power is derived from solar, wind, geothermal, biomass or low-impact hydro sources.

**Material & Resources**

*The steps related to process building materials, such as extraction, processing and transportation are not environmentally natural, as they pollute the air, water and use natural resources. Construction and demolition wastes account for 40% of the solid waste stream in the US. Reusing existing documents is one of the best strategies to reduce solid wastes volumes and prevents then from ending up at landfills. It also reduces habitat disturbance and minimizes the need for the surrounding infrastructure. While using new materials one should take into account different material sources. Salvaged materials provide savings on material costs, recycled content material minimizes waste products and local materials reduce the environmental impact of transportation. Finally, using rapidly renewable materials and certified wood decreases the consumption of natural resources. Recycling and reusing construction waste is another strategy to be taken into consideration in sustainable design.*

(source: LEED Reference Guide, 2001:167)

CHALLENGES: Create dedicated recycling areas and program. Re-use existing building structure to reduce construction waste. Provide construction waste management program should any construction be provided. Specify recycled, regional, and rapidly renewable building materials. Use FSC certified wood products in any new design or renovation. MRp1: Storage & Collection of Recyclables In any potential building addition/renovation coordinate the size and functionality of the recycling areas with the anticipated collection services for glass, plastic, office paper, newspaper, cardboard and organic wastes to maximize the effectiveness of the dedicated areas. Consider employing cardboard balers, aluminum can crushers, recycling chutes and collection bins at individual workstations to further enhance the recycling program. MRc1.1(75%) and 1.2(95%): Building Reuse, Walls, Floors, Roof In any potential renovation monitor percentage reuse of structure, envelope and elements. Remove elements that pose contamination risk to occupants and upgrade components that would improve energy and water efficiency such as windows, mechanical systems and plumbing fixtures. Quantify the extent of building reuse. MRc1.3: Building Reuse, Maintain 50% of Interior Non-Structural Elements In any potential renovation monitor percentage reuse of structure, envelope and interior non-structural elements. Remove elements that pose contamination risk to occupants and upgrade components that would improve energy and water efficiency, such as mechanical systems and plumbing fixtures. Quantify the extent of building reuse. MRc2.1(50%) and 2.2(75%): Construction Waste Management In any potential building addition/renovation establish goals for building material diversion from disposal in landfills and incinerators and adopt a construction waste management plan to achieve these goals. Consider recycling cardboard, metal, brick, acoustical tile, concrete, plastic, clean wood, glass, gypsum wallboard, carpet and insulation. Designate a specific area(s) on the construction site for segregated or comingled collection of recyclable materials, and track recycling efforts throughout the construction process. Identify construction haulers and recyclers to handle the designated materials. Note that diversion may include donation of materials to charitable organizations and salvage of materials on-site. MRc3.1(5%) and 3.2(10%): Resource Reuse In any potential building addition/renovation identify opportunities to incorporate salvaged materials into building design and research potential material suppliers. Consider salvaged materials such as beams and posts, flooring, paneling, doors and frames, cabinetry and furniture, brick and decorative items. MRc4.1(10%) and 4.2(20%): Recycled Content In any potential building addition/renovation establish a project goal for recycled content materials and identify material suppliers that can achieve this goal. During construction, ensure that the specified recycled content materials are installed. Consider a range of environmental, economic and performance attributes when selecting products and materials. MRc5.1 (10%) and 5.2 (20%): Regional Materials In any potential building addition/renovation establish a project goal for locally sourced materials and identify materials and material suppliers that can achieve this goal. During construction, ensure that the specified local materials are installed. Consider a range of environmental, economic and performance attributes when selecting products and materials. MRc6: Rapidly Renewable Materials In any potential building addition/renovation establish a project goal for rapidly renewable materials and identify products and suppliers that can support achievement of this goal. Consider materials such as bamboo, wool, cotton insulation, agrifiber, linoleum, wheatboard, strawboard and cork. During construction, ensure that the specified renewable materials are installed. MRc7: Certified Wood In any potential building addition/renovation establish a project goal for FSC-certified wood products and identify suppliers that can achieve this goal. During construction, ensure that the FSC-certified wood products are installed and quantify the total percentage of FSC-certified wood products installed.

**Indoor Environmental Quality**

*As we spend a big majority of our time indoors, the emphasis should be put on optimal indoor environmental quality strategies while (re)designing a building . Otherwise, a poor IEQ will have adverse effects on occupants' health, productivity and quality of life. IEQ strategies such as ventilation effectiveness and control of contaminants or a building flush-out prior to occupancy can reduce potential liability, increase the market value of the building but can also result in a significantly higher productivity (16%). Other strategies involve automatic sensors and controls, introducing fresh air to the building or providing lots of daylighting views.*

(source: LEED Reference Guide, 2001:215)

CHALLENGES: Prohibit smoking in the building and site. Measure carbon dioxide and make any corrective action required. Design heat recovery options when available. Monitor indoor air quality during construction and avoid contaminating permanent HVAC equipment during construction. Flush building after construction. Specify low emitting materials in any construction activities. Provide controllable lighting and HVAC systems. Provide any changes to building envelope to increase performance. Design daylighting strategies to maximize views and provide indoor lighting solutions. EQp1: Minimum IAQ Performance Design ventilation systems to meet or exceed the minimum outdoor air ventilation rates as described in the ASHRAE standard. Balance the impacts of ventilation rates on energy use and indoor air quality to optimize for energy efficiency and occupant health. EQp2: Environmental Tobacco Smoke (ETS) Control Prohibit smoking in the facility or effectively control the ventilation air in smoking rooms. EQc1: Outdoor Air Delivery Monitoring Install carbon dioxide and airflow measurement equipment and feed the information to the HVAC system to trigger corrective action or to trigger alarms. EQc2: Increased Ventilation Use heat recovery, where appropriate, to minimize the additional energy consumption associated with higher ventilation rates. EQc3.1: Construction IAQ Management Plan, During Construction Adopt an IAQ management plan to protect the HVAC system during construction. Sequence the installation of materials to avoid contamination. Avoid using permanently installed air handlers for temporary heating/cooling during construction. EQc3.2: Construction IAQ Management Plan, Before Occupancy Perform a building flush-out or test the air contaminant levels in the building. EQc4.1: Low-Emitting Materials, Adhesives & Sealants Specify low-VOC materials. Products to evaluate include adhesives, sealants, and caulking. EQc4.2: Low-Emitting Materials, Paints & Coatings Specify low-VOC paints and coatings. Track the VOC content of all interior paints and coatings during construction. EQc4.3: Low-Emitting Materials, Carpet Systems Specify requirements for product testing and/or certification. Select products that are either certified under the Green Label Plus program or for which testing has been done by qualified independent laboratories. EQc4.4: Low-Emitting Materials, Composite Wood & Agrifiber In any potential building addition/renovation specify wood, agrifiber products, and adhesives that contain no added urea-formaldehyde resins. EQc5: Indoor Chemical & Pollutant Source Control Design facility cleaning and maintenance areas with isolated exhaust systems for contaminants. Maintain physical isolation from the rest of the regularly occupied areas of the building. EQc6.1: Controllability of Systems, Lighting Design the building with occupant controls for lighting. Strategies to consider include lighting controls and task lighting. Integrate lighting systems controllability into the overall lighting design, providing ambient and task lighting while managing the overall energy use of the building. EQc6.2: Controllability of Systems, Thermal Comfort Design the building and systems with comfort controls to allow adjustments to suit individual needs or those of groups in shared spaces. EQc7.1: Thermal Comfort, Design and EQc7.2 Thermal Comfort, Verification: Design building envelope and systems with the capability to deliver performance to the comfort criteria under expected environmental and use conditions. Evaluate air temperature, radiant temperature, air speed, and relative humidity in an integrated fashion and coordinate these criteria with EQ Prerequisites. EQc8.1: Daylighting & Views, Daylight 75% of Spaces Design the building to maximize interior daylighting. Predict daylight factors via manual calculations or model daylighting strategies with a physical or computer model to assess foot-candle levels and daylight factors achieved. EQc8.2: Daylighting & Views, Views for 90% of Spaces Design the space to maximize daylighting and view opportunities. Strategies to consider include lower partition heights, interior shading devices, interior glazing, and automatic photocell-based controls.

**Innovation & Design Process**

*This category is aimed at recognizing projects that implemented innovative building features and sustainable building knowledge, and whose strategy or measure results exceeded those which are required by the LEED Rating System. Expertise in sustainable design is the key element of the innovative design and construction process.*

(source: LEED Reference Guide, 2001:271)

CHALLENGES: Provide strategies that provide energy and water efficiency solutions. Incorporate the services of a LEED Accredited Professional (AP) for any future renovation or additions. IDc1.1, IDc1.2, IDc 1.3, and IDc 1.4: Innovation in Design Substantially exceed a LEED for New Construction performance credit such as energy performance or water efficiency. Apply strategies or measures that demonstrate a comprehensive approach and quantifiable environment and/or health benefits. IDc2: LEED Accredited Professional At least one principal participant of the project team shall be a LEED Accredited Professional (AP).

***Justification for Allocation of Points - Shaker Heights City***

Building Name and Level: **Fernway Elem**

**K-4**

**Building features that clearly exceed criteria:**

1. Building is located in quiet neighborhood.
2. Building is less than 1-year old at time of assessment. All finishes and devices are new.
3. 
4. 
5. 
6. 

**Building features that are non-existent or very inadequate:**

1. Building does not contain a kitchen.
2. 
3. 
4. 
5. 
6. 

Back to Assessment Summary

# *Environmental Hazards Assessment Cost Estimates*

| | |
|---|---|
| **Owner:** | Shaker Heights City |
| **Facility:** | Fernway Elem |
| **Date of Initial Assessment:** | Aug 13, 2021 |
| **Date of Assessment Update:** | Nov 3, 2021 |
| **Cost Set:** | 2021 |

| | |
|---|---|
| **District IRN:** | 44750 |
| **Building IRN:** | 11536 |
| **Firm:** | Ohio Facilities Construction Commission |

**Scope remains unchanged after cost updates.**

| Building Addition | Addition Area (sf) | Total of Environmental Hazards Assessment Cost Estimates | |
|---|---|---|---|
| | | Renovation | Demolition |
| 1927 (01) 1927 Original Construction | 32,543 | $0.00 | $0.00 |
| 1958 (02) 1958 SW Addition | 3,110 | $0.00 | $0.00 |
| 2020 (03) 2020 SE and 2nd floor Media Addition | 7,093 | $0.00 | $0.00 |
| Total | 42,746 | $0.00 | $0.00 |
| Total with Regional Cost Factor (109.74%) | — | $0.00 | $0.00 |
| Regional Total with Soft Costs & Contingency | — | $0.00 | $0.00 |