

FACILITY CONDITION ASSESSMENT

Prepared for

Ann Arbor Public Schools
2555 South State Street
Ann Arbor, Michigan 48104
Jim Vibbart



PREPARED BY:

EMG

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July 2, 2018

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February 19, 2018

FACILITY CONDITION ASSESSMENT

OF

PITTSFIELD ELEMENTARY
2543 PITTSFIELD BOULEVARD
ANN ARBOR, MICHIGAN 48104



engineering | environmental | capital planning | project management

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**Immediate Repairs Report
Pittsfield Elementary**

7/2/2018



| Location Name | EMG Renamed Item Number | ID | Cost Description | Quantity | Unit | Unit Cost * | Subtotal | Deficiency Repair Estimate * |
|--------------------------------|-------------------------|--------|--|----------|------|-------------|-----------|------------------------------|
| Pittsfield Elementary | 5 | 859200 | Packaged Unit (RTU), 5 Ton, Replace | 1 | EA | \$12,925.18 | \$12,925 | \$12,925 |
| Pittsfield Elementary | D30 | 885578 | Air Conditioning, Central, Install | 41631 | SF | \$11.50 | \$478,757 | \$478,757 |
| Pittsfield Elementary | | 958692 | Davis Bacon Prevailing Wages, Surcharge for Prevailing Wages, 10% surcharge for prevailing wages | 37353.9 | LS | \$1.15 | \$42,957 | \$42,957 |
| Immediate Repairs Total | | | | | | | | \$534,639 |

* Location Factor included in totals.

| EMG Renamed Item Number | ID | Cost Description | Lifespan (EUL) | EAge | RUL | Quantity | Unit | Unit Cost | w/ Markup * | Subtotal | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | RRR_Row | GrandTotalLabel | | | | | | | | | | | | | |
|--|--------|--|----------------|------|-----|----------|------|-------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|----------|-----------|-----------|----------|----------|-----------|-----------|-------------|-------------|-----------|----------|-----------------|----------|-----------|-----------|-----------|--|--|--|-------------|--|--|--|--|-------------|
| 7 | 859257 | Fences & Gates, Chain Link, 4' High, Replace | 30 | 13 | 17 | 1250 | LF | \$30.51 | \$35.09 | \$43,861 | | | | | | | | | | | | | | | | | | | | | | \$43,861 | \$43,861 | | | | | | | | | | | | |
| 7 | 859256 | Signage, Property, Monument/Pylon, Replace | 20 | 8 | 12 | 1 | EA | \$8,602.00 | \$9,892.30 | \$9,892 | | | | | | | | | | | | | \$9,892 | | | | | | | | | | \$9,892 | \$9,892 | | | | | | | | | | | |
| 7 | 859250 | Play Surfaces & Sports Courts, Asphalt, Seal & Stripe | 5 | 3 | 2 | 15000 | SF | \$0.38 | \$0.44 | \$6,564 | | | \$6,564 | | | | | \$6,564 | | | | | \$6,564 | | | | | | | | | | \$6,564 | \$26,255 | | | | | | | | | | | |
| 7 | 859261 | Play Surfaces & Sports Courts, Wood Chips, 3" Depth, Replace | 20 | 8 | 12 | 20000 | SF | \$0.81 | \$0.93 | \$18,556 | | | | | | | | | | | | | \$18,556 | | | | | | | | | | \$18,556 | \$18,556 | | | | | | | | | | | |
| 7 | 859258 | Play Structure, Small, Replace | 20 | 8 | 12 | 4 | EA | \$18,975.00 | \$21,821.25 | \$87,285 | | | | | | | | | | | | | \$87,285 | | | | | | | | | | \$87,285 | \$87,285 | | | | | | | | | | | |
| 7 | 859288 | Flagpole, Metal, Replace | 20 | 8 | 12 | 1 | EA | \$2,530.00 | \$2,909.50 | \$2,910 | | | | | | | | | | | | | \$2,910 | | | | | | | | | | \$2,910 | \$2,910 | | | | | | | | | | | |
| D30 | 885578 | Air Conditioning, Central, Install | 50 | 50 | 0 | 41631 | SF | \$10.00 | \$11.50 | \$478,757 | \$478,757 | | | | | | | | | | | | | | | | | | | | | | | \$478,757 | \$478,757 | | | | | | | | | | |
| | 947085 | Exterior Door Hardware, Electronic Door Locks ANSI F39 Lockset, Replace | 30 | 29 | 1 | 12 | EA | \$1,345.00 | \$1,546.75 | \$18,561 | | \$18,561 | | | | | | | | | | | | | | | | | | | | | | \$18,561 | \$18,561 | | | | | | | | | | |
| | 960800 | Solar Instillation Project, Roof Mounted Solar Instillation, Install | 20 | 12 | 8 | 288000 | SF | \$1.00 | \$1.15 | \$331,200 | | | | | | | | | \$331,200 | | | | | | | | | | | | | | | \$331,200 | \$331,200 | | | | | | | | | | |
| D30 | 945813 | Building Automation System (HVAC Controls), Upgrade | 20 | 18 | 2 | 41631 | SF | \$5.36 | \$6.17 | \$256,733 | | | \$256,733 | | | | | | | | | | | | | | | | | | | | | \$256,733 | \$256,733 | | | | | | | | | | |
| D40 | 937995 | Sprinkler System, Full Retrofit, School (per SF), Renovate | 50 | 46 | 4 | 30000 | SF | \$6.25 | \$7.19 | \$215,746 | | | | | \$215,746 | | | | | | | | | | | | | | | | | | | \$215,746 | \$215,746 | | | | | | | | | | |
| D50 | 937997 | Lighting System, Interior, School, Upgrade | 25 | 7 | 18 | 41631 | SF | \$15.36 | \$17.67 | \$735,533 | | | | | | | | | | | | | | | | | | | | | | | | \$735,533 | \$735,533 | | | | | | | | | | |
| | 947086 | Intercom Master Station, Replace | 20 | 19 | 1 | 1 | EA | \$3,814.50 | \$4,386.67 | \$4,387 | | \$4,387 | | | | | | | | | | | | | | | | | | | | | | \$4,387 | \$4,387 | | | | | | | | | | |
| D50 | 945814 | Clock and Bell System, Wireless or Ethernet Enabled, Up To 100 Total Clocks / Bells, Replace | 15 | 14 | 1 | 41631 | SF | \$0.51 | \$0.59 | \$24,417 | | \$24,417 | | | | | | | | | | | | | | | | | | | | | | \$24,417 | \$24,417 | | | | | | | | | | |
| | 947084 | Security/Surveillance System, Cameras and CCTV, Install | 10 | 9 | 1 | 41631 | SF | \$4.35 | \$5.00 | \$208,125 | | \$208,125 | | | | | | | | | | \$208,125 | | | | | | | | | | | | \$208,125 | \$208,125 | | | | | | | | | | |
| | 958692 | Davis Bacon Prevailing Wages, Surcharge for Prevailing Wages, 10% surcharge for prevailing wages | 1 | 1 | 0 | 37353.9 | LS | \$1.00 | \$1.15 | \$42,957 | \$42,957 | \$42,957 | \$42,957 | \$42,957 | \$42,957 | \$42,957 | \$42,957 | \$42,957 | \$42,957 | \$42,957 | \$42,957 | \$42,957 | \$42,957 | \$42,957 | \$42,957 | \$42,957 | \$42,957 | \$42,957 | \$42,957 | \$42,957 | \$42,957 | \$42,957 | \$42,957 | \$42,957 | \$859,140 | \$859,140 | | | | | | | | | |
| Totals, Unescalated | | | | | | | | | | | \$534,639 | \$298,446 | \$743,168 | \$224,134 | \$258,703 | \$177,251 | \$42,957 | \$744,874 | \$374,157 | \$248,845 | \$48,101 | \$379,480 | \$617,140 | \$42,957 | \$42,957 | \$74,242 | \$67,374 | \$828,387 | \$831,269 | \$171,354 | | | | | | | | | | \$6,750,434 | | | | | |
| Totals, Escalated (3.0% inflation, compounded annually) | | | | | | | | | | | \$534,639 | \$307,400 | \$788,427 | \$244,917 | \$291,172 | \$205,482 | \$51,293 | \$916,101 | \$473,971 | \$324,686 | \$64,644 | \$525,288 | \$879,894 | \$63,084 | \$64,976 | \$115,666 | \$108,115 | \$1,369,198 | \$1,415,180 | \$300,471 | | | | | | | | | | | | | | | \$9,044,604 |

* Markup/LocationFactor (1.0) has been included in unit costs. Markup includes a and 15% Ann Arbor Premium factors applied to the location adjusted unit cost.

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1 Executive Summary

1.1 Property Information and General Physical Condition

The property information is summarized in the table below. More detailed descriptions may be found in the various sections of the report and in the Appendices.

| Property Information | | |
|---|---|------------------------|
| Address: | 2543 Pittsfield Boulevard Ann Arbor, MI 48104 | |
| Year Constructed/Renovated: | 1944 | |
| Current Occupants: | Pittsfield Elementary | |
| Percent Utilization: | 100% | |
| Management Point of Contact: | Ann Arbor Public Schools Jim Vibbart, Maintenance Supervisor | |
| Property Type: | Elementary School | |
| Site Area: | 4.0 acres | |
| Building Area: | 41,631 SF | |
| Number of Buildings: | One | |
| Number of Stories: | One | |
| Parking Type and Number of Spaces: | 43 spaces in open lots | |
| Building Construction: | Masonry bearing walls and concrete-topped metal decks. | |
| Roof Construction: | Flat roofs with single-ply membrane. | |
| Exterior Finishes: | Brick Veneer | |
| Heating, Ventilation & Air Conditioning: | Central system with boilers, air handlers, and rooftop units feeding hydronic terminal units. Supplemental components: ductless split-systems, suspended unit heaters. | |
| Fire and Life/Safety: | Partial fire sprinklers, hydrants, smoke detectors, alarms, strobes, extinguishers, pull stations, alarm panel, and exit signs. | |
| ADA : | This building does not have any major ADA issues. | |
| All 41,631 square feet of the building are occupied by a single occupant, Pittsfield Elementary. The spaces are a combination of offices, classrooms, extracurricular spaces, and supporting restrooms, mechanical and other utility spaces. | | |
| Most of the interior spaces were observed in order to gain a clear understanding of the property's overall condition. Other areas accessed included the site within the property boundaries, exterior of the property and the roof. All areas of the property were available for observation during the site visit. | | |
| Key Spaces Not Observed | | |
| Room Number | Area | Access Issues |
| NA | Exterior Storage Shed | Locked room and no key |
| A "down unit" or area is a term used to describe a unit or space that cannot be occupied due to poor conditions such as fire damage, water damage, missing equipment, damaged floor, wall or ceiling surfaces, or other significant deficiencies. There are no down units or areas. | | |

| Assessment Information | |
|------------------------------------|---|
| Dates of Visit: | February 19, 2018 |
| On-Site Point of Contact (POC): | None |
| Assessment and Report Prepared by: | Sean Luxem |
| Reviewed by: | Al Diefert Technical Report Reviewer For Andrew Hupp Program Manager ahupp@emgcorp.com 800.733.0660 x6632 |

1.2 Key Findings

Site : Areas of asphalt pavement show signs of deterioration.

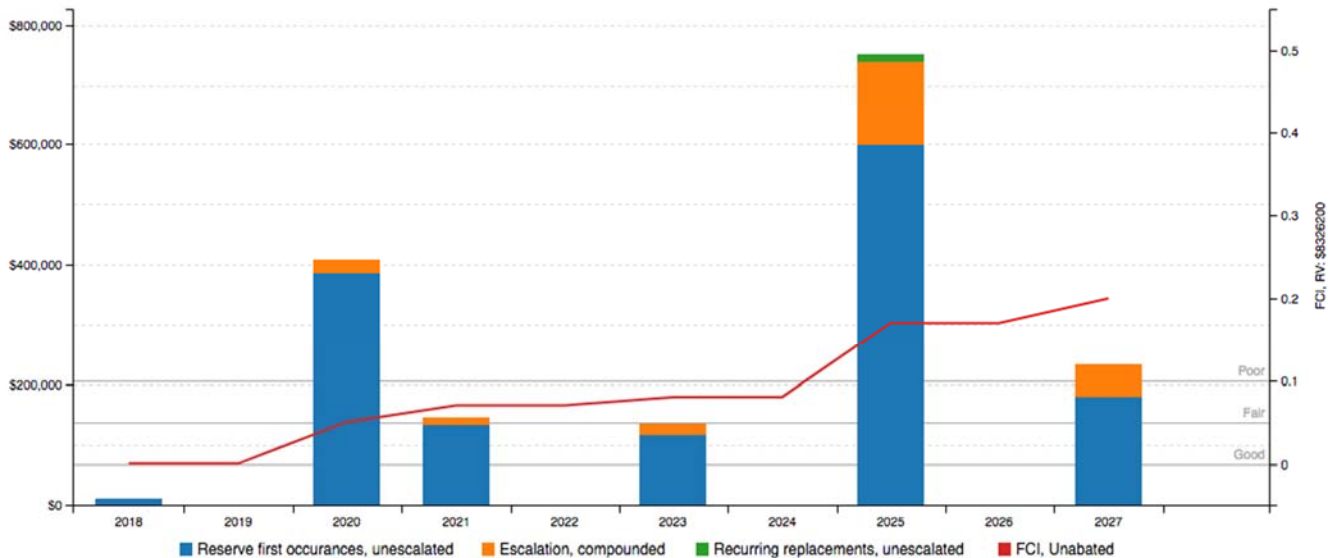
Architectural : Minor repairs required such as masonry repointing, and painting

MEPF : Majority of the systems are antiquated and are near the end of their expected useful life.

1.3 Facility Condition Index (FCI)

FCI Analysis: Pittsfield Elementary

Replacement Value: \$ 8,326,200; Inflation rate: 3.0%



One of the major goals of the FCA is to calculate the FCI, which gives an indication of a building's overall condition. Two FCI ratios are calculated and presented, the Current Year and Ten-Year. The Current Year FCI is the ratio of Immediate Repair Costs to the building's Current Replacement Value. Similarly, the Ten-Year FCI is the ratio of anticipated Capital Reserve Needs over the next ten years to the Current Replacement Value.

| FCI Rating | Definition | Percentage Value |
|------------|--|------------------|
| Good | In new or well-maintained condition, with no visual evidence of wear, soiling or other deficiencies. | 0 to .05 |

| FCI Rating | Definition | Percentage Value |
|------------|---|-------------------|
| Fair | Subjected to wear and soiling but is still in a serviceable and functioning condition. | > than .05 to .10 |
| Poor | Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life. | > than .10 to .60 |
| Very Poor | Has reached the end of its useful or serviceable life. Renewal is now necessary. | > than .60 |

The graphs above and tables below represent summary-level findings for the FCA. The deficiencies identified in this assessment can be combined with potential new construction requirements to develop an overall strategy that can serve as the basis for a portfolio-wide capital improvement funding strategy. Key findings from the assessment include:

| KEY FINDING | METRIC |
|---|-------------|
| Current Year Facility Condition Index (FCI) FCI = (IR)/(CRV): | 0.13% |
| Current Year FCI Rating: | 2018 |
| 10-Year Facility Condition Index (FCI) FCI = (RR)/(CRV): | 20.24% |
| 10-Year FCI Rating | 0.2 |
| Current Replacement Value (CRV): | \$8,326,200 |
| Year 0 (Current Year) - Immediate Repairs (IR): | \$11,239 |
| Years 1-10 - Replacement Reserves (RR): | \$1,673,979 |
| Total Capital Needs: | \$1,685,219 |

Further detail on the specific costs that make up the Immediate Repair Costs can be found in the cost tables at the beginning of this report.



2 Building Structure

A10 Foundations

| Building Foundation | | |
|--------------------------|--------------------------------------|-----------|
| Item | Description | Condition |
| Foundation | Slab on grade with integral footings | Good |
| Basement and Crawl Space | None | -- |

Anticipated Lifecycle Replacements

- No components of significance

Actions/Comments:

- Isolated areas of the foundation systems are exposed, which allows for limited observation. There are no significant signs of settlement, deflection, or movement.

B10 Superstructure

| B1010 Floor Construction & B1020 Roof Construction | | |
|--|-------------------------------------|-----------|
| Item | Description | Condition |
| Framing / Load-Bearing Walls | Masonry walls | Good |
| Ground Floor | Concrete slab | Good |
| Roof Framing | Steel beams or girders | Good |
| Roof Decking | Metal decking with concrete topping | Good |

| Maintenance Issues | | | | | |
|--------------------|----------|--------------------------|-------------|----------|--------------------------|
| Observation | Location | Exists At Site | Observation | Location | Exists At Site |
| Other | -- | <input type="checkbox"/> | Other | -- | <input type="checkbox"/> |
| Other | -- | <input type="checkbox"/> | Other | -- | <input type="checkbox"/> |

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- The superstructure is exposed in some locations, which allows for limited observation. Walls and floors appear to be plumb, level, and stable. There are no significant signs of deflection or movement.

| B1080 Stairs | | | | | |
|--------------------------|--------------------------------|--------|----------|-----------|-----------|
| Type | Description | Riser | Handrail | Balusters | Condition |
| Building Exterior Stairs | Concrete stairs | Closed | Metal | Metal | Fair |
| Building Interior Stairs | Steel Framed With Vinyl treads | Closed | Metal | Metal | Good |

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- No significant actions are identified at the present time. On-going periodic maintenance is highly recommended.

3 Building Envelope

B20 Exterior Vertical Enclosures

| B2010 Exterior Walls | | |
|----------------------|---|-----------|
| Type | Location | Condition |
| Primary Finish | Brick veneer | Good |
| Secondary Finish | Metal siding | Good |
| Accented with | Painted CMU | Fair |
| Soffits | Concealed | Good |
| Building sealants | Between dissimilar materials, at joints, around windows and doors | Good |

| Maintenance Issues | | | | | |
|--------------------|----------|--------------------------|---------------|----------|--------------------------|
| Observation | Location | Exists At Site | Observation | Location | Exists At Site |
| Graffiti | | <input type="checkbox"/> | Efflorescence | | <input type="checkbox"/> |
| Other | | <input type="checkbox"/> | Other | | <input type="checkbox"/> |

Anticipated Lifecycle Replacements:

- Exterior paint

Actions/Comments:

- No significant actions are identified at the present time. On-going periodic maintenance, including patching repairs, and re-caulking, is highly recommended. Future lifecycle replacements of the components listed above will be required.

| B2020 Exterior Windows | | | | |
|----------------------------|--------------|----------------|-------------------------------------|-----------|
| Window Framing | Glazing | Location | Window Screen | Condition |
| Aluminum framed storefront | Double glaze | Front Entrance | <input type="checkbox"/> | Good |
| Aluminum framed, fixed | Double glaze | Throughout | <input type="checkbox"/> | Good |
| Aluminum framed, operable | Double glaze | Classrooms | <input checked="" type="checkbox"/> | Good |

| B2050 Exterior Doors | | |
|--------------------------|-------------------------|-----------|
| Main Entrance Doors | Door Type | Condition |
| | Vinyl coated, insulated | Good |
| Secondary Entrance Doors | Vinyl coated, insulated | Good |



| B2050 Exterior Doors | | |
|----------------------|-------------------------|-----------|
| Main Entrance Doors | Door Type | Condition |
| | Vinyl coated, insulated | Good |
| Service Doors | Metal, insulated | Fair |
| Overhead Doors | None | -- |

Anticipated Lifecycle Replacements:

- Windows
- Exterior doors

Actions/Comments:

- No significant actions are identified at the present time. On-going periodic maintenance is highly recommended.

| B3010 Primary Roof | | | |
|--------------------|-----------------------------|----------------------|---------------------|
| Location | Main Building | Finish | Single-ply membrane |
| Type / Geometry | Flat | Roof Age | 3 Yrs |
| Flashing | Sheet metal | Warranties | Unknown |
| Parapet Copings | None | Roof Drains | Internal drains |
| Fascia | Metal Panel | Insulation | Rigid Board |
| Soffits | Concealed Soffits | Skylights | No |
| Attics | Concrete-topped steel decks | Ventilation Source-1 | Power Vents |
| Roof Condition | Good | Ventilation Source-2 | -- |

| Maintenance Issues | | | | | |
|------------------------------------|----------|--------------------------|--------------------------|----------|--------------------------|
| Observation | Location | Exists At Site | Observation | Location | Exists At Site |
| Drainage components broken/missing | | <input type="checkbox"/> | Vegetation/fungal growth | | <input type="checkbox"/> |
| Blocked Drains | | <input type="checkbox"/> | Debris | | <input type="checkbox"/> |
| Other | | <input type="checkbox"/> | Other | | <input type="checkbox"/> |

| Degradation Issues | | | |
|-------------------------------|--------------------------|-----------------------|-------------------------------------|
| Observation | Exists At Site | Observation | Exists At Site |
| Evidence of roof leaks | <input type="checkbox"/> | Significant ponding | <input checked="" type="checkbox"/> |
| Excessive patching or repairs | <input type="checkbox"/> | Blistering or ridging | <input type="checkbox"/> |
| Other | <input type="checkbox"/> | Other | <input type="checkbox"/> |



Anticipated Lifecycle Replacements:

- EPDM roof membrane

Actions/Comments:

- The roof finishes were installed in 2015. Information regarding roof warranties or bonds was not available. The roofs are maintained by an outside contractor.
- There is no evidence of roof deck or insulation deterioration. The roof substrate and insulation should be inspected during any future roof repair or replacement work.
- Roof drainage appears to be adequate. Clearing and minor repair of drain system components should be performed regularly as part of the property management's routine maintenance and operations program
- The attics are not accessible and it could not be determined if there is moisture, water intrusion, or excessive daylight in the attics.

4 Interiors

C10 Interior Construction

| C1030 Interior Doors | | |
|----------------------|-----------------|-----------|
| Item | Type | Condition |
| Interior Doors | Solid core wood | Good |
| Door Framing | Metal | Good |
| Fire Doors | No | -- |
| Closet Doors | Solid core wood | Good |

| Maintenance Issues | | | | | |
|-----------------------------------|----------|--------------------------|-----------------------------|----------|--------------------------|
| Observation | Location | Exists At Site | Observation | Location | Exists At Site |
| Improperly adjusted door closures | | <input type="checkbox"/> | Damaged/loose door hardware | | <input type="checkbox"/> |
| Other | | <input type="checkbox"/> | Other | | <input type="checkbox"/> |

The following table generally describes the locations and typical conditions of the interior finishes within the facility:

Interior Finishes - PITTSFIELD ELEMENTARY

| Location | Finish | | Quantity (SF) | Condition | RUL | Est. Cost |
|----------|---------|---|---------------|-----------|-----|-----------|
| Interior | Wall | General Surface | 60000 | Fair | 3 | 87,000 |
| Interior | Floor | Vinyl Tile (VCT) | 21000 | Fair | 5 | 100,813 |
| Interior | Floor | Carpet Standard-Commercial Medium-Traffic | 16000 | Fair | 2 | 116,101 |
| Interior | Ceiling | Suspended Acoustical Tile (ACT) | 38000 | Good | 12 | 118,218 |
| Restroom | Floor | Vinyl Sheeting | 4200 | Fair | 2 | 29,439 |

| Maintenance Issues | | | | | |
|--------------------------|----------|--------------------------|--------------------------------------|----------|--------------------------|
| Observation | Location | Exists At Site | Observation | Location | Exists At Site |
| Loose carpeting/flooring | | <input type="checkbox"/> | Minor areas of stained ceiling tiles | | <input type="checkbox"/> |
| Minor paint touch-up | | <input type="checkbox"/> | Areas of damaged/missing baseboard | | <input type="checkbox"/> |
| Other | | <input type="checkbox"/> | Other | | <input type="checkbox"/> |

Anticipated Lifecycle Replacements:

- Carpet

- Vinyl tile
- Sheet vinyl
- Interior paint
- Suspended acoustic ceiling tile
- Interior doors

Actions/Comments:

- It appears that the interior finishes have not been renovated within the last 10 years.
- No significant actions are identified at the present time. On-going periodic maintenance is highly recommended. Future lifecycle replacements of the components listed above will be required.

5 Services (MEPF)

See the Mechanical Equipment List in the Appendices for the quantity, manufacturer's name, model number, capacity and year of manufacturer of the major mechanical equipment, if available.

D10 Conveying Systems

Not applicable. There are no elevators or conveying systems.

D20 Plumbing

| D2010 Domestic Water Distribution | | |
|-----------------------------------|-----------------|-----------|
| Type | Description | Condition |
| Water Supply Piping | Copper | Good |
| Water Meter Location | Mechanical Room | |

| Domestic Water Heaters or Boilers | |
|-----------------------------------|--------------|
| Components | Water Heater |
| Fuel | Natural gas |
| Boiler or Water Heater Condition | Fair |
| Supplementary Storage Tanks? | No |
| Adequacy of Hot Water | Adequate |
| Adequacy of Water Pressure | Adequate |

| D2020 Sanitary Drainage | | |
|-------------------------|-------------|-----------|
| Type | Description | Condition |
| Waste/Sewer Piping | Cast iron | Good |
| Vent Piping | Cast iron | Good |

| Maintenance Issues | | | | | |
|---------------------------------------|----------|--------------------------|-------------------------|----------|--------------------------|
| Observation | Location | Exists At Site | Observation | Location | Exists At Site |
| Hot water temperature too hot or cold | | <input type="checkbox"/> | Minor or isolated leaks | | <input type="checkbox"/> |
| Other | | <input type="checkbox"/> | Other | | <input type="checkbox"/> |

Plumbing Systems - PITTSFIELD ELEMENTARY

| Location | Component | Component_Description | Quantity | Unit | Condition | Action | RUL | Est. Cost |
|-----------------|-------------------|--|----------|------|-----------|---------|-----|-----------|
| Mechanical room | Water Heater | Condensing Style, High Efficiency, 71 to 120 GAL | 1 | EA | Fair | Replace | 5 | 15,965 |
| Mechanical room | Air Compressor | 5 HP | 1 | EA | Fair | Replace | 7 | 9,652 |
| Restroom | Toilet | Tankless (Water Closet) | 25 | EA | Good | Replace | 12 | 21,074 |
| Restroom | Urinal | Vitreous China | 1 | EA | Good | Replace | 12 | 1,193 |
| Restroom | Sink | Vitreous China | 25 | EA | Good | Replace | 12 | 21,538 |
| Throughout | Sink | Stainless Steel | 20 | EA | Good | Replace | 12 | 21,081 |
| Throughout | Drinking Fountain | Refrigerated | 5 | EA | Fair | Replace | 2 | 6,288 |

Anticipated Lifecycle Replacements:

- Water heater
- Toilets
- Urinals
- Sinks
- Drinking fountains

Actions/Comments:

- The plumbing systems appear to be well maintained and functioning adequately. The water pressure appears to be sufficient. No significant repair actions or short term replacement costs are required. Routine and periodic maintenance is recommended. Future lifecycle replacements of the components or systems listed above will be required.

D30 Building Heating, Ventilating, and Air Conditioning (HVAC)

| Building Central Heating System | |
|---------------------------------|-------------------|
| Primary Heating System Type | Hot water boilers |
| Heating Fuel | Natural gas |
| Location of Major Equipment | Mechanical rooms |
| Space Served by System | Entire building |

| Building Central Cooling System | |
|---------------------------------|-----------------|
| Primary Cooling System Type | Rooftop units |
| Refrigerant | R-22 |
| Cooling Towers | None |
| Location of Major Equipment | Rooftop |
| Space Served by System | Entire building |

| Distribution System | |
|--------------------------------|---------------|
| HVAC Water Distribution System | Two-pipe |
| Air Distribution System | Constant |
| Location of Air Handlers | Above ceiling |

| Distribution System | |
|---|--|
| Terminal Units | Hydronic wall units, unit ventilators |
| Quantity and Capacity of Terminal Units | approximately 20 unit ventilators ranging from 1,000 to 2,000 CFM approximately 200 LF of hydronic wall units |
| Location of Terminal Units | Within interior spaces |

| Packaged, Split & Individual Units | |
|------------------------------------|--------------------------------|
| Primary Components | Ductless mini-split |
| Cooling (if separate from above) | performed via components above |
| Heating Fuel | None |
| Location of Equipment | Rooftop |
| Space Served by System | Data closet |

| Supplemental/Secondary Components | |
|-----------------------------------|------------------------|
| Supplemental Component #1 | Suspended unit heaters |
| Location / Space Served by units | BOH Areas |
| Unit Condition | Good |

| Controls and Ventilation | |
|-------------------------------|--|
| HVAC Control System | Individual programmable thermostats/controls |
| HVAC Control System Condition | Good |
| Building Ventilation | Roof top exhaust fans |
| Ventilation System Condition | Fair |

| Maintenance Issues | | | | | |
|------------------------------|----------|--------------------------|----------------------------------|----------|--------------------------|
| Observation | Location | Exists At Site | Observation | Location | Exists At Site |
| Ductwork/grills need cleaned | | <input type="checkbox"/> | Minor control adjustments needed | | <input type="checkbox"/> |
| Leaking condensate lines | | <input type="checkbox"/> | Poor mechanical area access | | <input type="checkbox"/> |
| Other | | <input type="checkbox"/> | Other | | <input type="checkbox"/> |



| Degradation Issues | | | |
|---|--------------------------|---|-------------------------------------|
| Observation | Exists At Site | Observation | Exists At Site |
| Heating, Cooling or Ventilation is not adequate | <input type="checkbox"/> | Major system inefficiencies | <input type="checkbox"/> |
| HVAC controls pneumatic or antiquated | <input type="checkbox"/> | Obsolete refrigerants : R11, R12, R22, R123, R502 | <input checked="" type="checkbox"/> |
| Other | <input type="checkbox"/> | Other | <input type="checkbox"/> |

Mechanical Systems - PITTSFIELD ELEMENTARY

| Location | Component | Component Description | Quantity | Unit | Condition | Action | RUL | Est. Cost |
|-----------------|-----------------------|-------------------------------|----------|------|-----------|---------|-----|-----------|
| Ceiling | Air Handler | Interior, 6,501 to 8,000 CFM | 1 | EA | Good | Replace | 17 | 26,017 |
| Exterior wall | Air Conditioner | Window/Thru-Wall, 1 Ton | 6 | EA | Fair | Replace | 2 | 11,987 |
| Interior | Unit Heater | Hydronic, 86 to 100 MBH | 3 | EA | Good | Replace | 12 | 6,381 |
| Interior | Radiator | Hydronic Baseboard | 200 | LF | Good | Replace | 32 | 26,554 |
| Interior | Unit Ventilator | 1,501 to 2,000 CFM | 20 | EA | Fair | Replace | 7 | 254,540 |
| Mechanical room | Boiler | 2,501 to 4,200 MBH | 1 | EA | Fair | Replace | 7 | 120,905 |
| Mechanical room | Boiler | 2,501 to 4,200 MBH | 1 | EA | Fair | Replace | 7 | 120,905 |
| Mechanical room | Distribution Pump | Heating Water, 5 HP | 1 | EA | Good | Replace | 12 | 5,519 |
| Mechanical room | Distribution Pump | Heating Water, 5 HP | 1 | EA | Good | Replace | 12 | 5,519 |
| Mechanical room | Expansion Tank | 61 to 100 GAL | 1 | EA | Good | Replace | 17 | 3,250 |
| Roof | Air Handler | Exterior, 8,001 to 10,000 CFM | 1 | EA | Fair | Replace | 3 | 45,895 |
| Roof | Packaged Unit (RTU) | 6 to 7.5 Ton | 1 | EA | Fair | Replace | 2 | 14,396 |
| Roof | Packaged Unit (RTU) | 5 Ton | 1 | EA | Poor | Replace | 0 | 11,239 |
| Roof | Ductless Split System | Single Zone, 1.5 to 2 Ton | 1 | EA | Good | Replace | 10 | 4,473 |
| Roof | Exhaust Fan | Roof Mounted, 60 to 150 CFM | 20 | EA | Fair | Replace | 2 | 29,488 |

Anticipated Lifecycle Replacements:

- Boilers
- Air handling unit
- Distribution pumps and motors
- Package units
- Ductless mini-splits
- Suspended hydronic unit heaters
- Hydronic baseboard heaters
- Rooftop exhaust fans
- Unit ventilators
- Window air conditioners

Actions/Comments:

- The HVAC systems are maintained by an outside contractor.
- The HVAC equipment varies in age. HVAC equipment is replaced on an "as needed" basis.
- The HVAC equipment appears to be functioning adequately overall. However, due to the inevitable failure of parts and components over time, some of the equipment will require replacement



D40 Fire Protection

| Item | Description | | | | | |
|----------------------------|--|--------------------------|--------------------------|----------------------------------|---------------------|--------------------------|
| Type | Partial wet pipe system, with supplementary components | | | | | |
| Sprinkler System | None | <input type="checkbox"/> | Standpipes | <input type="checkbox"/> | Backflow Preventer | <input type="checkbox"/> |
| | Hose Cabinets | <input type="checkbox"/> | Fire Pumps | <input type="checkbox"/> | Siamese Connections | <input type="checkbox"/> |
| Sprinkler System Condition | Good | | | | | |
| Fire Extinguishers | Last Service Date | | | Servicing Current? | | |
| | August 2017 | | | Yes | | |
| Hydrant Location | Exterior | | | | | |
| Siamese Location | NA | | | | | |
| Special Systems | Kitchen Suppression System | | <input type="checkbox"/> | Computer Room Suppression System | | <input type="checkbox"/> |

| Maintenance Issues | | | | | |
|--------------------------|----------|--------------------------|----------------------------|----------|--------------------------|
| Observation | Location | Exists At Site | Observation | Location | Exists At Site |
| Extinguisher tag expired | | <input type="checkbox"/> | Riser tag expired (5 year) | | <input type="checkbox"/> |
| Other | | <input type="checkbox"/> | Other | | <input type="checkbox"/> |

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- No significant actions are identified at the present time. On-going periodic maintenance is highly recommended.

D50 Electrical

| Distribution & Lighting | | | |
|---------------------------------|------------------|---------------------------|---------------------------|
| Electrical Lines | Underground | Transformer | Pad-mounted |
| Main Service Size | 800 Amps | Volts | 120/208 Volt, three-phase |
| Meter & Panel Location | Custodian Office | Branch Wiring | Copper |
| Conduit | Metallic | Step-Down Transformers? | No |
| Security / Surveillance System? | Yes | Building Intercom System? | Yes |



| Distribution & Lighting | |
|---|---------------|
| Lighting Fixtures | T-8, CFL, LED |
| Main Distribution Condition | Good |
| Secondary Panel and Transformer Condition | -- |
| Lighting Condition | Good |

| Building Emergency Systems | | | |
|----------------------------|------|---------------|----|
| Size | None | Fuel | -- |
| Generator / UPS Serves | -- | Tank Location | -- |
| Testing Frequency | -- | Tank Type | -- |
| Generator / UPS Condition | -- | | |

| Maintenance Issues | | | | | |
|----------------------------|----------|--------------------------|-----------------------------|----------|--------------------------|
| Observation | Location | Exists At Site | Observation | Location | Exists At Site |
| Improperly stored material | | <input type="checkbox"/> | Unsecured high voltage area | | <input type="checkbox"/> |
| Other | | <input type="checkbox"/> | Other | | <input type="checkbox"/> |

Anticipated Lifecycle Replacements:

- Main switchgear

Actions/Comments:

- The onsite electrical systems up to the meters are owned and maintained by the respective utility company.
- The electrical service and capacity appear to be adequate for the property's demands.
- The panels and switchboards are mostly 1990-2000 components. The electrical service appears to be adequate for the facility's needs. However, due to the age of the panels and switchboards and increasing difficulty of obtaining replacement parts over time, lifecycle replacements are recommended per above.

D60 Communications

| D6060 Public Address Systems | | | | | | |
|------------------------------|-----------------------|-------------------------------------|-------------------|--------------------------|-------|-------------------------------------|
| Item | Description | | | | | |
| Communication Equipment | Public Address System | <input checked="" type="checkbox"/> | Nurse Call System | <input type="checkbox"/> | Clock | <input checked="" type="checkbox"/> |



D70 Electronic Safety and Security

| D7010 Access Control and Intrusion Detection / D7050 Detection and Alarm | | | | | | |
|--|-------------------------|-------------------------------------|----------------------------------|-------------------------------------|------------------------|-------------------------------------|
| Item | Description | | | | | |
| Access Control and Intrusion Detection | Exterior Camera | <input checked="" type="checkbox"/> | Interior Camera | <input checked="" type="checkbox"/> | Front Door Camera Only | <input type="checkbox"/> |
| | Cameras Monitored | <input checked="" type="checkbox"/> | Security Personnel On-Site | <input type="checkbox"/> | Intercom/Door Buzzer | <input checked="" type="checkbox"/> |
| Fire Alarm System | Central Alarm Panel | <input checked="" type="checkbox"/> | Battery-Operated Smoke Detectors | <input type="checkbox"/> | Alarm Horns | <input checked="" type="checkbox"/> |
| | Annunciator Panels | <input type="checkbox"/> | Hard-Wired Smoke Detectors | <input checked="" type="checkbox"/> | Strobe Light Alarms | <input checked="" type="checkbox"/> |
| | Pull Stations | <input checked="" type="checkbox"/> | Emergency Battery-Pack Lighting | <input type="checkbox"/> | Illuminated EXIT Signs | <input checked="" type="checkbox"/> |
| Fire Alarm System Condition | Fair | | | | | |
| Central Alarm Panel System | Location of Alarm Panel | | | Installation Date of Alarm Panel | | |
| | Main Office | | | 2000 | | |

Anticipated Lifecycle Replacements:

- Central alarm panel
- Alarm devices and system

Actions/Comments:

- No significant actions are identified at the present time. On-going periodic maintenance is highly recommended.



6 Equipment & Furnishings

E10 Equipment

The cafeteria area has a variety of commercial kitchen appliances, fixtures, and equipment. The equipment is owned and maintained in-house.

The cafeteria kitchen includes the following major appliances, fixtures, and equipment:

| E1030 Commercial Kitchen Equipment | | |
|------------------------------------|-------------------------------------|-----------|
| Appliance | Comment | Condition |
| Refrigerators | Up-right and Reach-in | Good |
| Freezers | <input type="checkbox"/> | -- |
| Ranges | <input type="checkbox"/> | -- |
| Ovens | Gas | Good |
| Griddles / Grills | <input type="checkbox"/> | -- |
| Fryers | <input type="checkbox"/> | -- |
| Hood | <input type="checkbox"/> | -- |
| Dishwasher | <input type="checkbox"/> | -- |
| Microwave | <input checked="" type="checkbox"/> | Good |
| Ice Machines | <input type="checkbox"/> | -- |
| Steam Tables | <input type="checkbox"/> | -- |

| E1030 Commercial Laundry | | |
|-----------------------------|--------------------------|-----------|
| Equipment | Comment | Condition |
| Commercial Washing Machines | <input type="checkbox"/> | -- |
| Commercial Dryers | <input type="checkbox"/> | -- |
| Residential Washers | <input type="checkbox"/> | -- |
| Residential Dryers | <input type="checkbox"/> | -- |

| E1050 Pool Equipment | | |
|----------------------|---------|-----------|
| Equipment | Comment | Condition |
| | None | -- |

Anticipated Lifecycle Replacements:

- Oven
- Reach-in cooler



- Up-right cooler

Actions/Comments:

- No significant actions are identified at the present time. On-going periodic maintenance is highly recommended.

7 Sitework

G20 Site Improvements

| G2020 Parking Lots & G2030 Pedestrian Walkways | | |
|--|----------|-----------|
| Item | Material | Condition |
| Entrance Driveway Apron | Asphalt | Fair |
| Parking Lot | Asphalt | Fair |
| Drive Aisles | Asphalt | Fair |
| Service Aisles | None | -- |
| Sidewalks | Concrete | Good |
| Curbs | Concrete | Good |
| Pedestrian Ramps | Wood | Good |
| Ground Floor Patio or Terrace | None | -- |

| Parking Count | | | | |
|---|---------|----------------|---------------------|--------------------------------|
| Open Lot | Carport | Private Garage | Subterranean Garage | Freestanding Parking Structure |
| 43 | -- | -- | -- | -- |
| Total Number of ADA Compliant Spaces | | | 3 | |
| Number of ADA Compliant Spaces for Vans | | | 0 | |
| Total Parking Spaces | | | 43 | |

| Site Stairs | | | |
|------------------------------|-----------------|-----------|-----------|
| Location | Material | Handrails | Condition |
| North Exterior Service Doors | Concrete stairs | Metal | Fair |

| Maintenance Issues | | | | | |
|------------------------|----------|--------------------------|---|----------|--------------------------|
| Observation | Location | Exists At Site | Observation | Location | Exists At Site |
| Pavement oil stains | | <input type="checkbox"/> | Vegetation growth in joints | | <input type="checkbox"/> |
| Stair/ramp rails loose | | <input type="checkbox"/> | Stair/ramp rail needs scraped and painted | | <input type="checkbox"/> |
| Other | | <input type="checkbox"/> | Other | | <input type="checkbox"/> |

| Degradation Issues | | | |
|----------------------|--------------------------|-----------------------------------|-------------------------------------|
| Observation | Exists At Site | Observation | Exists At Site |
| Potholes/depressions | <input type="checkbox"/> | Alligator cracking | <input checked="" type="checkbox"/> |
| Concrete spalling | <input type="checkbox"/> | Trip hazards (settlement/heaving) | <input type="checkbox"/> |
| Other | <input type="checkbox"/> | Other | <input type="checkbox"/> |

Anticipated Lifecycle Replacements:

- Asphalt seal coating
- Asphalt pavement
- Sidewalks
- Site stairs and handrails
- Pedestrian ramps

Actions/Comments:

- No significant actions are identified at the present time. On-going periodic maintenance is highly recommended. Future lifecycle replacements of the components listed above will be required.

| G2060 Site Development | |
|---------------------------|----------|
| Property Signage | |
| Property Signage | Monument |
| Street Address Displayed? | No |

| Site Fencing | | |
|-----------------------------|----------------|-----------|
| Type | Location | Condition |
| Chain link with metal posts | Rear Perimeter | Good |
| Chain link with metal posts | Softball Field | Fair |

| Refuse Disposal | | | | |
|--------------------|-----------------------|-----------|-------------|-----------|
| Refuse Disposal | Common area dumpsters | | | |
| Dumpster Locations | Mounting | Enclosure | Contracted? | Condition |
| South Parking Area | Concrete pad | None | Yes | Good |

| Other Site Amenities | | | |
|----------------------|-------------------|---------------|-----------|
| | Description | Location | Condition |
| Playground Equipment | Plastic and metal | Rear Exterior | Good |



| Other Site Amenities | | | |
|----------------------|-------------|---------------|-----------|
| | Description | Location | Condition |
| Tennis Courts | None | -- | -- |
| Basketball Court | Asphalt | Rear Exterior | Fair |
| Swimming Pool | None | -- | -- |

The rear exterior perimeter is surrounded by a chain link fence.

Anticipated Lifecycle Replacements:

- Signage
- Site fencing
- Playground equipment
- Playground surfaces
- Flagpole

Actions/Comments:

- No significant actions are identified at the present time. On-going periodic maintenance is highly recommended.

| G2080 Landscaping | | |
|-------------------------------------|-------------------------------------|-----------|
| Drainage System and Erosion Control | | |
| System | Exists At Site | Condition |
| Surface Flow | <input checked="" type="checkbox"/> | Good |
| Inlets | <input checked="" type="checkbox"/> | Good |
| Swales | <input type="checkbox"/> | -- |
| Detention pond | <input type="checkbox"/> | -- |
| Lagoons | <input type="checkbox"/> | -- |
| Ponds | <input type="checkbox"/> | -- |
| Underground Piping | <input checked="" type="checkbox"/> | Good |
| Pits | <input type="checkbox"/> | -- |
| Municipal System | <input checked="" type="checkbox"/> | Good |
| Dry Well | <input type="checkbox"/> | -- |

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- There is no evidence of storm water runoff from adjacent properties. The storm water system appears to provide adequate runoff capacity. There is no evidence of major ponding or erosion.

| Item | Description | | | | | | |
|-----------------------|--|-------------------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|
| Site Topography | Slopes gently down from the south side of the property to the north property line. | | | | | | |
| Landscaping | Trees | Grass | Flower Beds | Planters | Drought Tolerant Plants | Decorative Stone | None |
| | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Landscaping Condition | Good | | | | | | |
| Irrigation | Automatic Underground | | Drip | | Hand Watering | | None |
| | <input type="checkbox"/> | | <input type="checkbox"/> | | <input type="checkbox"/> | | <input checked="" type="checkbox"/> |
| Irrigation Condition | -- | | | | | | |

| Retaining Walls | | |
|-----------------|----------|-----------|
| Type | Location | Condition |
| None | -- | -- |

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- The topography and adjacent uses do not appear to present conditions detrimental to the property. There are no significant areas of erosion.

G30 Liquid & Gas Site Utilities

| G3060 Site Fuel Distribution | |
|------------------------------|---|
| Item | Description |
| Natural Gas | Gas service is supplied from the gas main on the adjacent public street. The gas meter and regulator are located in the mechanical room. The gas distribution piping within the building is malleable steel (black iron). |

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- The pressure and quantity of gas appear to be adequate.
- The gas meter and regulator appear to be functioning adequately and will require routine maintenance.
- Only limited observation of the gas distribution piping can be made due to hidden conditions.



G40 Electrical Site Improvements

| G4050 Site Lighting | | | | | |
|---------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|
| Site Lighting | None | Pole Mounted | Bollard Lights | Ground Mounted | Parking Lot Pole Type |
| | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | -- | | | | |
| Building Lighting | None | | Wall Mounted | Recessed Soffit | |
| | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | Good | | | | |

| Maintenance Issues | | | | | |
|--------------------------------|----------|--------------------------|-----------------------------|----------|--------------------------|
| Observation | Location | Exists At Site | Observation | Location | Exists At Site |
| Isolated bulb/lamp replacement | | <input type="checkbox"/> | Discolored/dirty lens cover | | <input type="checkbox"/> |
| Other | | <input type="checkbox"/> | Other | | <input type="checkbox"/> |

Anticipated Lifecycle Replacements:

- Exterior lighting

Actions/Comments:

- No significant actions are identified at the present time. On-going periodic maintenance is highly recommended.



8 Ancillary Structures

| Other Ancillary Structures | | | |
|----------------------------|--|---------------|-------------------------|
| Type | Maintenance/Storage Shed | Location | Rear Exterior |
| Item | Material | Item | Material |
| Exterior Siding | Concrete | Roof Finishes | Concrete |
| Interior Finishes | Floor : Unknown, no access Ceiling : Unknown, no access Walls : Unknown, no access | MEPF | See Tables in Section 5 |
| Overall Building Condition | | | Good |

Anticipated Lifecycle Replacements:

- Storage shed

Actions/Comments:

- No significant actions are identified at the present time. On-going periodic maintenance is highly recommended.

9 Opinions of Probable Costs

Cost estimates are attached at the front of this report (following the cover page).

These estimates are based on Invoice or Bid Document/s provided either by the Owner/facility and construction costs developed by construction resources such as *R.S. Means* and *Marshall & Swift*, EMG's experience with past costs for similar properties, city cost indexes, and assumptions regarding future economic conditions.

Opinions of probable costs should only be construed as preliminary, order of magnitude budgets. Actual costs most probably will vary from the consultant's opinions of probable costs depending on such matters as type and design of suggested remedy, quality of materials and installation, manufacturer and type of equipment or system selected, field conditions, whether a physical deficiency is repaired or replaced in whole, phasing of the work (if applicable), quality of contractor, quality of project management exercised, market conditions, and whether competitive pricing is solicited, etc. ASTM E2018-08 recognizes that certain opinions of probable costs cannot be developed within the scope of this guide without further study. Opinions of probable cost for further study should be included in the FCA.

9.1 Methodology

Based upon site observations, research, and judgment, along with referencing Expected Useful Life (EUL) tables from various industry sources, EMG opines as to when a system or component will most probably necessitate replacement. Accurate historical replacement records, if provided, are typically the best source of information. Exposure to the elements, initial quality and installation, extent of use, the quality and amount of preventive maintenance exercised, etc., are all factors that impact the effective age of a system or component. As a result, a system or component may have an effective age that is greater or less than its actual chronological age. The Remaining Useful Life (RUL) of a component or system equals the EUL less its effective age. Projections of Remaining Useful Life (RUL) are based on continued use of the Property similar to the reported past use. Significant changes in occupants and/or usage may affect the service life of some systems or components.

Where quantities could not be derived from an actual take-off, lump sum costs or allowances are used. Estimated costs are based on professional judgment and the probable or actual extent of the observed defect, inclusive of the cost to design, procure, construct and manage the corrections.

9.2 Immediate Repairs

Immediate repairs are opinions of probable costs that require immediate action as a result of: (1) material existing or potential unsafe conditions, (2) material building or fire code violations, or (3) conditions that, if not addressed, have the potential to result in, or contribute to, critical element or system failure within one year or will most probably result in a significant escalation of its remedial cost.

9.3 Replacement Reserves

Replacement Reserves are for recurring probable expenditures, which are not classified as operation or maintenance expenses. The replacement reserves should be budgeted for in advance on an annual basis. Replacement Reserves are reasonably predictable both in terms of frequency and cost. However, Replacement Reserves may also include components or systems that have an indeterminable life but, nonetheless, have a potential for failure within an estimated time period.

Replacement Reserves exclude systems or components that are estimated to expire after the reserve term and are not considered material to the structural and mechanical integrity of the subject property. Furthermore, systems and components that are not deemed to have a material effect on the use of the Property are also excluded. Costs that are caused by acts of God, accidents, or other occurrences that are typically covered by insurance, rather than reserved for, are also excluded.

Replacement costs are solicited from ownership/property management, EMG's discussions with service companies, manufacturers' representatives, and previous experience in preparing such schedules for other similar facilities. Costs for work performed by the ownership's or property management's maintenance staff are also considered.

EMG's reserve methodology involves identification and quantification of those systems or components requiring capital reserve funds within the assessment period. The assessment period is defined as the effective age plus the reserve term. Additional information concerning system's or component's respective replacement costs (in today's dollars), typical expected useful lives, and remaining useful lives were estimated so that a funding schedule could be prepared. The Replacement Reserves Schedule presupposes that all required remedial work has been performed or that monies for remediation have been budgeted for items defined in the Immediate Repair Cost Estimate

10 Purpose and Scope

10.1 Purpose

EMG was retained by the client to render an opinion as to the Property's current general physical condition on the day of the site visit.

Based on the observations, interviews and document review outlined below, this report identifies significant deferred maintenance issues, existing deficiencies, and material code violations of record at municipal offices, which affect the Property's use. Opinions are rendered as to its structural integrity, building system condition and the Property's overall condition. The report also notes building systems or components that have realized or exceeded their typical expected useful lives.

CONDITIONS:

The physical condition of building systems and related components are typically defined as being in one of five conditions: Excellent, Good, Fair, Poor, Failed or a combination thereof. For the purposes of this report, the following definitions are used:

| | | |
|----------------|---|---|
| Excellent | = | New or very close to new; component or system typically has been installed within the past year, sound and performing its function. Eventual repair or replacement will be required when the component or system either reaches the end of its useful life or fails in service. |
| Good | = | Satisfactory as-is. Component or system is sound and performing its function, typically within the first third of its lifecycle. However, it may show minor signs of normal wear and tear. Repair or replacement will be required when the component or system either reaches the end of its useful life or fails in service. |
| Fair | = | Showing signs of wear and use but still satisfactory as-is, typically near the median of its estimated useful life. Component or system is performing adequately at this time but may exhibit some signs of wear, deferred maintenance, or evidence of previous repairs. Repair or replacement will be required due to the component or system's condition and/or its estimated remaining useful life. |
| Poor | = | Component or system is significantly aged, flawed, functioning intermittently or unreliably; displays obvious signs of deferred maintenance; shows evidence of previous repair or workmanship not in compliance with commonly accepted standards; has become obsolete; or exhibits an inherent deficiency. The present condition could contribute to or cause the deterioration of contiguous elements or systems. Either full component replacement is needed or repairs are required to restore to good condition, prevent premature failure, and/or prolong useful life. |
| Failed | = | Component or system has ceased functioning or performing as intended. Replacement, repair, or other significant corrective action is recommended or required. |
| Not Applicable | = | Assigning a condition does not apply or make logical sense, most commonly due to the item in question not being present. |

Throughout sections 5 through 9 of this report, each report section will typically contain three subsections organized in the following sequence:

- A descriptive table (and/or narrative), which identifies the components assessed, their condition, and other key data points.
- A simple bulleted list of Anticipated Lifecycle Replacements, which lists components and assets typically in Excellent, Good, or Fair condition at the time of the assessment but that will require replacement or some other attention once aged past their estimated useful life. These listed components are typically included in the associated inventory database with costs identified and budgeted beyond the first several years.
- A bulleted cluster of Actions/Comments, which include more detailed narratives describing deficiencies, recommended repairs, and short term replacements. The assets and components associated with these bullets are/were typically problematic and in Poor or Failed condition at the time of the assessment, with corresponding costs included within the first few years.

PLAN TYPES:

Each line item in the cost database is assigned a Plan Type, which is the primary reason or rationale for the recommended replacement, repair, or other corrective action. This is the “why” part of the equation. A cost or line item may commonly have more than one applicable Plan Type; however, only one Plan Type will be assigned based on the “best” fit, typically the one with the greatest significance. The following Plan Types are listed in general weighted order of importance:

| | | |
|--------------------------|---|---|
| Safety | = | An observed or reported unsafe condition that if left unaddressed could result in an injury; a system or component that presents a potential liability risk. |
| Performance/Integrity | = | Component or system has failed, is almost failing, performs unreliably, does not perform as intended, and/or poses a risk to overall system stability. |
| Accessibility | = | Does not meet ADA, UFAS, and/or other handicap accessibility requirements. |
| Environmental | = | Improvements to air or water quality, including removal of hazardous materials from the building or site. |
| Modernization/Adaptation | = | Conditions, systems, or spaces that need to be upgraded in appearance or function to meet current standards, facility usage, or client/occupant needs. |
| Lifecycle/Renewal | = | Any component or system in which future repair or replacement is anticipated beyond the next several years and/or is of minimal substantial early-term consequence. |

10.2 Scope

The standard scope of the Facility Condition Assessment includes the following:

- Visit the Property to evaluate the general condition of the building and site improvements, review available construction documents in order to familiarize ourselves with, and be able to comment on, the in-place construction systems, life safety, mechanical, electrical, and plumbing systems, and the general built environment.
- Identify those components that are exhibiting deferred maintenance issues and provide cost estimates for Immediate Costs and Replacement Reserves based on observed conditions, maintenance history and industry standard useful life estimates. This will include the review of documented capital improvements completed within the last five-year period and work currently contracted for, if applicable.
- Provide a full description of the Property with descriptions of in-place systems and commentary on observed conditions.
- Provide a general statement of the subject Property’s compliance to Title III of the Americans with Disabilities Act. This will not constitute a full ADA survey, but will help identify exposure to issues and the need for further review.
- Perform a limited assessment of accessible areas of the building(s) for the presence of fungal growth, conditions conducive to fungal growth, and/or evidence of moisture. EMG will also interview Project personnel regarding the presence of any known or suspected fungal growth, elevated relative humidity, water intrusion, or mildew-like odors. Potentially affected areas will be photographed. Sampling will not be considered in routine assessments.
- List the current utility service providers.
- Review maintenance records and procedures with the in-place maintenance personnel.
- Observe a representative sample of the interior spaces/units, including vacant spaces/units, in order to gain a clear understanding of the property’s overall condition. Other areas to be observed include the exterior of the property, the roofs, interior common areas, and the significant mechanical, electrical and elevator equipment rooms.
- Provide recommendations for additional studies, if required, with related budgetary information.
- Provide an Executive Summary at the beginning of this report.
- Prepare a mechanical inventory list.

11 Accessibility and Property Research

11.1 ADA Accessibility

Generally, Title III of the Americans with Disabilities Act (ADA) prohibits discrimination by entities to access and use of "areas of public accommodations" and "commercial facilities" on the basis of disability. Regardless of its age, these areas and facilities must be maintained and operated to comply with the Americans with Disabilities Act Accessibility Guidelines (ADAAG).

Buildings completed and occupied after January 26, 1992 are required to comply fully with the ADAAG. Existing facilities constructed prior to this date are held to the lesser standard of compliance to the extent allowed by structural feasibility and the financial resources available. As an alternative, a reasonable accommodation pertaining to the deficiency must be made.

During the FCA, a limited visual observation for ADA accessibility compliance was conducted. The scope of the visual observation was limited to those areas set forth in *EMG's Abbreviated Accessibility Table* below. It is understood by the Client that the limited observations described herein does not comprise a full ADA Compliance Survey, and that such a survey is beyond the scope of EMG's undertaking. Only a representative sample of areas was observed and actual measurements were not taken to verify compliance.

The facility generally appears to be accessible as stated within the defined priorities of Title III of the Americans with Disabilities Act.

| Accessibility Issues | | | |
|---------------------------|--|---|-------------------------------------|
| Component | Major Issue (ADA Study Recommended) | Moderate Issue (ADA Study Recommended) | Minor Issue |
| Parking | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Exterior Accessible Route | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Interior Accessible Route | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Restrooms | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Elevators | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

A full ADA Compliance Survey may reveal aspects of the property that are not in compliance.

Corrections of these conditions should be addressed from a liability standpoint, but are not necessarily code violations. The Americans with Disabilities Act Accessibility Guidelines concern civil rights issues as they pertain to the disabled and are not a construction code, although many local jurisdictions have adopted the Guidelines as such.

12 Certification

Ann Arbor Public Schools retained EMG to perform this Facility Condition Assessment in connection with its continued operation of Pittsfield Elementary, 2543 Pittsfield Boulevard, Ann Arbor, Michigan, the "Property". It is our understanding that the primary interest of Ann Arbor Public Schools is to locate and evaluate materials and building system defects that might significantly affect the value of the property and to determine if the present Property has conditions that will have a significant impact on its continued operations.

The conclusions and recommendations presented in this report are based on the brief review of the plans and records made available to our Project Manager during the site visit, interviews of available property management personnel and maintenance contractors familiar with the Property, appropriate inquiry of municipal authorities, our Project Manager's walk-through observations during the site visit, and our experience with similar properties.

No testing, exploratory probing, dismantling or operating of equipment or in depth studies were performed unless specifically required under Section 2 of this report. This assessment did not include engineering calculations to determine the adequacy of the Property's original design or existing systems. Although walk-through observations were performed, not all areas were observed (See Section 4.2 for areas observed). There may be defects in the Property, which were in areas not observed or readily accessible, may not have been visible, or were not disclosed by management personnel when questioned. The report describes property conditions at the time that the observations and research were conducted.

This report has been prepared on behalf of and exclusively for the use of the client for the purpose stated within Section **Error! Reference source not found.** of this report. The report, or any excerpt thereof, shall not be used by any party other than the client or for any other purpose than that specifically stated in our agreement or within Section **Error! Reference source not found.** of this report without the express written consent of EMG.

Any reuse or distribution of this report without such consent shall be at Ann Arbor Public Schools and the recipient's sole risk, without liability to EMG.

Prepared by: Sean Luxem,
Project Manager

Reviewed by:



Al Diefert
Technical Report Reviewer For
Andrew Hupp
Program Manager

13 Appendices

- Appendix A: Photographic Record
- Appendix B: Site Plan
- Appendix C: Supporting Documentation
- Appendix D: Pre-Survey Questionnaire

Appendix A: Photographic Record



PHOTO #1: WEST ELEVATION



PHOTO #2: NORTH ELEVATION



PHOTO #3: EAST ELEVATION



PHOTO #4: SOUTH ELEVATION



PHOTO #5: MAIN ENTRANCE DOORS



PHOTO #6: PROPERTY SIGNAGE



PHOTO #7: CONCRETE SIDEWALKS AND ASPHALT PAVEMENT



PHOTO #8: ADA PARKING AREA



PHOTO #9: PLAYGROUND



PHOTO #10: BASKETBALL COURT



PHOTO #11: CHAIN LINK PERIMETER FENCING



PHOTO #12: CONCRETE STAIRS



PHOTO #13: SINGLE-PLY ROOFING



PHOTO #14: ROOFTOP UNIT



PHOTO #15: HVAC BOILER



PHOTO #16: CIRCULATION PUMPS



PHOTO #17: HYDRONIC TERMINAL UNIT



PHOTO #18: CLASSROOM UNIT VENTILATOR



PHOTO #19: SUSPENDED UNIT HEATERS



PHOTO #20: AIR HANDLER



PHOTO #21: DOMESTIC WATER HEATER



PHOTO #22: MAIN DISTRIBUTION PANEL



PHOTO #23: FIRE PANEL



PHOTO #24: KITCHEN EQUIPMENT



PHOTO #25: LOBBY



PHOTO #26: MAIN OFFICE



PHOTO #27: CONFERENCE ROOM



PHOTO #28: CLASSROOM



PHOTO #29: MEDIA CENTER



PHOTO #30: MULTI-PURPOSE ROOM



PHOTO #31: HALLWAY AND LOCKERS



PHOTO #32: GYMNASIUM



PHOTO #33: STAGE



PHOTO #34: CLASSROOM RESTROOM



PHOTO #35: RESTROOM STALL



PHOTO #36: RESTROOM SINKS

Appendix B: Site Plan

Site Plan



Project Name:
Pittsfield Elementary

Project Number:
129010.18R000-021.354

Source:
Google Earth

On-Site Date:
February 19, 2018

Appendix C: Supporting Documentation

Appendix D: Pre-Survey Questionnaire

EMG FACILITY CONDITION ASSESSMENT: PRE-SURVEY QUESTIONNAIRE

Building / Facility Name: Pittsfield Elementary
Name of person completing form: Sean Luxem
Title / Association with property: NA
Length of time associated w/ property: NA
Date Completed: February 19, 2018
Phone Number: 269.861.4786

Directions: Please answer all questions to the best of your knowledge and in good faith. Please provide additional details in the Comments column, or backup documentation for any **Yes** responses.

| DATA OVERVIEW | | RESPONSE | | | |
|---------------|---|---------------------------------|------|---------------|------|
| 1 | Year/s constructed | 1944 | | | |
| 2 | Building size in SF | 41,631 SF | | | |
| 3 | Major Renovation Dates | Façade | 2010 | HVAC | 2005 |
| | | Roof | 2015 | Electrical | 2000 |
| | | Interiors | 2010 | Site Pavement | 2010 |
| | | Accessibility | 2010 | other | |
| QUESTION | | RESPONSE | | | |
| 4 | Provide additional detail about the scope of the MAJOR additions, renovations, or systemic rehabilitations since construction (referenced above in Question 3). | Roof replacement, HVAC upgrades | | | |
| 5 | List other significant but somewhat lesser capital improvements, focusing on recent years (provide approximate year completed). | Asphalt seal | | | |
| 6 | List any major capital expenditures planned/requested for the next few years. Have they been budgeted? | Unknown | | | |
| 7 | Describe any on-going extremely problematic, historically chronic, or immediate facility needs. | Unknown | | | |

Mark the column corresponding to the appropriate response. Please provide additional details in the Comments column, or backup documentation for any **Yes** responses. (**NA** indicates "Not Applicable", **Unk** indicates "Unknown")

| QUESTION | | RESPONSE | | | | COMMENTS |
|----------|---|----------|----|-----|----|-----------------------------------|
| | | Yes | No | Unk | NA | |
| 8 | Are there any problems with foundations or structures, like excessive settlement? | | X | | | |
| 9 | Has any part of the facility ever contained visible suspect mold growth, or have there been any indoor air quality or mold related complaints from occupants? | | X | | | |
| 10 | Are there any wall, window, basement or roof leaks? | | X | | | |
| 11 | Are there any plumbing leaks, water pressure, or clogging/back-up problems? | | X | | | |
| 12 | Have there been any leaks or pressure problems with natural gas, HVAC supply/return lines, or steam service? | | X | | | |
| 13 | Are any areas of the facility inadequately heated, cooled or ventilated? Any poorly insulated areas? | | X | | | |
| 14 | Is the electrical service outdated, undersized, or otherwise problematic? | | X | | | |
| 15 | Are there any problems or inadequacies with exterior building-mounted lighting? | | X | | | |
| 16 | Is site/parking drainage inadequate, with excessive ponding or other problems? | | X | | | |
| 17 | Are there any other unresolved construction defects or significant issues/hazards at the property that have not yet been identified above? | | X | | | |
| 18 | ADA: Has an accessibility study been performed at the site? If so, indicate when. | | | X | | |
| 19 | ADA: If a study has occurred, have the associated recommendations been addressed? In full or in part? | X | | | | In part; Van signage is required. |
| 20 | ADA: Have there been regular complaints about accessibility issues, or associated previous or pending litigation? | | X | | | |

On the day of the site visit, provide EMG's Field Observer access to all of the available documents listed below. Provide copies if possible.

INFORMATION REQUIRED

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. All available construction documents (blueprints) for the original construction of the building or for any tenant improvement work or other recent construction work. 2. A site plan, preferably 8 1/2" X 11", which depicts the arrangement of buildings, roads, parking stalls, and other site features. 3. For commercial properties, provide a tenant list which identifies the names of each tenant, vacant tenant units, the floor area of each tenant space, and the gross and net leasable area of the building(s). 4. For apartment properties, provide a summary of the apartment unit types and apartment unit type quantities, including the floor area of each apartment unit as measured in square feet. 5. For hotel or nursing home properties, provide a summary of the room types and room type quantities. 6. Copies of Certificates of Occupancy, building permits, fire or health department inspection reports, elevator inspection certificates, roof or HVAC warranties, or any other similar, relevant documents. 7. The names of the local utility companies which serve the property, including the water, sewer, electric, gas, and phone companies. | <ol style="list-style-type: none"> 8. The company name, phone number, and contact person of all outside vendors who serve the property, such as mechanical contractors, roof contractors, fire sprinkler or fire extinguisher testing contractors, and elevator contractors. 9. A summary of recent (over the last 5 years) capital improvement work which describes the scope of the work and the estimated cost of the improvements. Executed contracts or proposals for improvements. Historical costs for repairs, improvements, and replacements. 10. Records of system & material ages (roof, MEP, paving, finishes, furnishings). 11. Any brochures or marketing information. 12. Appraisal, either current or previously prepared. 13. Current occupancy percentage and typical turnover rate records (for commercial and apartment properties). 14. Previous reports pertaining to the physical condition of property. 15. ADA survey and status of improvements implemented. 16. Current / pending litigation related to property condition. |
|---|---|

Your timely compliance with this request is greatly appreciated.