

# FACILITY CONDITION ASSESSMENT

*Prepared for*

Ann Arbor Public Schools  
2555 State Street  
Ann Arbor, Michigan 48104



## PREPARED BY:

EMG

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## EMG PROJECT #:

129010.18R000-002.354

## DATE OF REPORT:

February 1, 2018

## ONSITE DATE:

January 15, 2018

## FACILITY CONDITION ASSESSMENT

OF

MITCHELL ELEMENTARY  
3550 PITTSVIEW DRIVE  
ANN ARBOR, MICHIGAN 48108



engineering | environmental | capital planning | project management

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**Immediate Repairs Report**  
**Mitchell Elementary**  
**2/2/2018**



| EMG Renamed Item Number        | ID     | Cost Description  | Quantity | Unit | Unit Cost  | Subtotal | Deficiency Repair Estimate * |
|--------------------------------|--------|---|----------|------|------------|----------|------------------------------|
| 3                              | 813721 | Storefront, Metal-Framed Windows w/out Door(s), Replace | 114      | SF   | \$48.00    | \$5,472  | <b>\$5,472</b>               |
| 5                              | 813762 | Fan Coil Unit, 800, Replace                             | 12       | EA   | \$2,198.58 | \$26,383 | <b>\$26,383</b>              |
| 5                              | 813715 | Study, Fire Protection, System,                         | 1        | EA   | \$6,500.00 | \$6,500  | <b>\$6,500</b>               |
|                                | 845457 | Engineer, Structural, General, Design                   | 1        | EA   | \$6,500.00 | \$6,500  | <b>\$6,500</b>               |
| <b>Immediate Repairs Total</b> |        |   |          |      |            |          | <b>\$44,855</b>              |

\* Location Factor (1.0) included in totals.

Replacement Reserves Report

Mitchell Elementary



2/2/2018

| Location            | 2018     | 2019      | 2020        | 2021        | 2022      | 2023      | 2024    | 2025     | 2026      | 2027      | 2028        | 2029      | 2030     | 2031      | 2032      | 2033      | 2034    | 2035     | 2036      | 2037      | Total Escalated Estimate |
|---------------------|----------|-----------|-------------|-------------|-----------|-----------|---------|----------|-----------|-----------|-------------|-----------|----------|-----------|-----------|-----------|---------|----------|-----------|-----------|--------------------------|
| Mitchell Elementary | \$44,855 | \$401,539 | \$1,532,195 | \$1,116,329 | \$317,979 | \$542,880 | \$4,070 | \$85,018 | \$126,120 | \$117,349 | \$2,477,091 | \$176,650 | \$81,479 | \$157,679 | \$129,982 | \$108,783 | \$5,470 | \$14,311 | \$537,831 | \$392,208 | \$8,369,816              |
| GrandTotal          | \$44,855 | \$401,539 | \$1,532,195 | \$1,116,329 | \$317,979 | \$542,880 | \$4,070 | \$85,018 | \$126,120 | \$117,349 | \$2,477,091 | \$176,650 | \$81,479 | \$157,679 | \$129,982 | \$108,783 | \$5,470 | \$14,311 | \$537,831 | \$392,208 | \$8,369,816              |

| EMG Renamed Item Number | ID     | Cost Description   | Lifespan (EUL) | EAge | RUL | Quantity | Unit | Unit Cost  | Subtotal  | 2018    | 2019 | 2020      | 2021      | 2022     | 2023     | 2024    | 2025    | 2026     | 2027    | 2028 | 2029 | 2030 | 2031 | 2032      | 2033    | 2034     | 2035     | 2036      | 2037 | Deficiency Repair Estimate |
|-------------------------|--------|--|----------------|------|-----|----------|------|------------|-----------|---------|------|-----------|-----------|----------|----------|---------|---------|----------|---------|------|------|------|------|-----------|---------|----------|----------|-----------|------|----------------------------|
| 2                       | 813787 | Foundation, , Repair   | 40             | 38   | 2   | 400      | SF   | \$10.44    | \$4,176   |         |      | \$4,176   |           |          |          |         |         |          |         |      |      |      |      |           |         |          |          |           |      | \$4,176                    |
| 2                       | 813712 | Roof Structure, , Replace  | 50             | 40   | 10  | 37650    | SF   | \$25.52    | \$960,828 |         |      |           |           |          |          |         |         |          |         |      |      |      |      | \$960,828 |         |          |          |           |      | \$960,828                  |
| 2                       | 816259 | Brick Veneer Exterior Wall, Exterior, 1-2 Stories, Repair            | 25             | 23   | 2   | 15290    | SF   | \$41.28    | \$631,211 |         |      | \$631,211 |           |          |          |         |         |          |         |      |      |      |      |           |         |          |          |           |      | \$631,211                  |
| 3                       | 813765 | Window, 1-2 Stories, 24 SF, Replace                                  | 30             | 25   | 5   | 4        | EA   | \$1,311.24 | \$5,245   |         |      |           |           |          | \$5,245  |         |         |          |         |      |      |      |      |           |         |          |          |           |      | \$5,245                    |
| 3                       | 813763 | Window, Double Glazed, 1-2 Stories, 12 SF, Replace                   | 30             | 20   | 10  | 2        | EA   | \$584.21   | \$1,168   |         |      |           |           |          |          |         |         |          |         |      |      |      |      | \$1,168   |         |          |          |           |      | \$1,168                    |
| 3                       | 813771 | Window, 1-2 Stories, 24 SF, Replace                                  | 30             | 20   | 10  | 2        | EA   | \$1,311.24 | \$2,622   |         |      |           |           |          |          |         |         |          |         |      |      |      |      | \$2,622   |         |          |          |           |      | \$2,622                    |
| 3                       | 813702 | Window, Double Glazed, 1-2 Stories, 24 SF, Replace                   | 30             | 18   | 12  | 7        | EA   | \$870.45   | \$6,093   |         |      |           |           |          |          |         |         |          |         |      |      |      |      |           |         | \$6,093  |          |           |      | \$6,093                    |
| 3                       | 813721 | Storefront, Metal-Framed Windows w/out Door(s), Replace              | 30             | 67   | 0   | 114      | SF   | \$48.00    | \$5,472   | \$5,472 |      |           |           |          |          |         |         |          |         |      |      |      |      |           |         |          |          |           |      | \$5,472                    |
| 3                       | 813773 | Storefront, Metal-Framed Windows w/out Door(s), Replace              | 30             | 20   | 10  | 3570     | SF   | \$48.00    | \$171,360 |         |      |           |           |          |          |         |         |          |         |      |      |      |      | \$171,360 |         |          |          |           |      | \$171,360                  |
| 3                       | 813741 | Storefront, Metal-Framed Windows w/out Door(s), Replace              | 30             | 20   | 10  | 488      | SF   | \$48.00    | \$23,424  |         |      |           |           |          |          |         |         |          |         |      |      |      |      | \$23,424  |         |          |          |           |      | \$23,424                   |
| 3                       | 813731 | Storefront, Metal-Framed Windows w/out Door(s), Replace              | 30             | 20   | 10  | 1380     | SF   | \$48.00    | \$66,240  |         |      |           |           |          |          |         |         |          |         |      |      |      |      | \$66,240  |         |          |          |           |      | \$66,240                   |
| 3                       | 813747 | Exterior Door, Fully Glazed, Exterior Door, Replace                  | 30             | 27   | 3   | 6        | EA   | \$2,106.57 | \$12,639  |         |      |           | \$12,639  |          |          |         |         |          |         |      |      |      |      |           |         |          |          |           |      | \$12,639                   |
| 3                       | 813736 | Exterior Door, Exterior Door, Replace                                | 25             | 20   | 5   | 6        | EA   | \$950.12   | \$5,701   |         |      |           |           |          | \$5,701  |         |         |          |         |      |      |      |      |           |         |          |          |           |      | \$5,701                    |
| 3                       | 813700 | Exterior Door, Exterior Door, Replace                                | 25             | 20   | 5   | 16       | EA   | \$950.12   | \$15,202  |         |      |           |           |          | \$15,202 |         |         |          |         |      |      |      |      |           |         |          |          |           |      | \$15,202                   |
| 3                       | 813767 | Roof, Built-Up, Replace  | 20             | 18   | 2   | 37650    | SF   | \$12.96    | \$487,997 |         |      | \$487,997 |           |          |          |         |         |          |         |      |      |      |      |           |         |          |          |           |      | \$487,997                  |
| 3                       | 816228 | Roof, Premium Grade, Replace   | 30             | 20   | 10  | 3600     | SF   | \$5.04     | \$18,143  |         |      |           |           |          |          |         |         |          |         |      |      |      |      | \$18,143  |         |          |          |           |      | \$18,143                   |
| 4                       | 813696 | Storefront, Metal-Framed Windows w/out Door(s), Replace              | 30             | 18   | 12  | 616      | SF   | \$48.00    | \$29,568  |         |      |           |           |          |          |         |         |          |         |      |      |      |      |           |         | \$29,568 |          |           |      | \$29,568                   |
| 4                       | 813706 | Interior Door, , Replace   | 20             | 18   | 2   | 19       | EA   | \$1,649.06 | \$31,332  |         |      | \$31,332  |           |          |          |         |         |          |         |      |      |      |      |           |         |          |          |           |      | \$31,332                   |
| 4                       | 813779 | Interior Door, Interior Door, Replace                                | 25             | 20   | 5   | 16       | EA   | \$950.12   | \$15,202  |         |      |           |           |          | \$15,202 |         |         |          |         |      |      |      |      |           |         |          |          |           |      | \$15,202                   |
| 4                       | 813699 | Interior Door, Solid Core, Painted/Stained, Interior Door, Replace   | 20             | 15   | 5   | 14       | EA   | \$1,423.11 | \$19,924  |         |      |           |           |          | \$19,924 |         |         |          |         |      |      |      |      |           |         |          |          |           |      | \$19,924                   |
| 4                       | 813708 | Interior Door, w/ Safety Glass, Interior Door, Replace               | 20             | 15   | 5   | 18       | EA   | \$1,352.72 | \$24,349  |         |      |           |           |          | \$24,349 |         |         |          |         |      |      |      |      |           |         |          |          |           |      | \$24,349                   |
| 4                       | 813722 | Interior Door, Fully Glazed, Interior Door, Replace                  | 30             | 22   | 8   | 1        | EA   | \$2,106.57 | \$2,107   |         |      |           |           |          |          |         |         |          | \$2,107 |      |      |      |      |           |         |          |          |           |      | \$2,107                    |
| 4                       | 813735 | Interior Door, , Replace   | 20             | 12   | 8   | 24       | EA   | \$1,649.06 | \$39,577  |         |      |           |           |          |          |         |         | \$39,577 |         |      |      |      |      |           |         |          |          |           |      | \$39,577                   |
| 4                       | 816256 | Interior Door, Solid Core, Painted/Stained, Interior Door, Replace   | 20             | 1    | 19  | 8        | EA   | \$1,423.11 | \$11,385  |         |      |           |           |          |          |         |         |          |         |      |      |      |      |           |         |          |          | \$11,385  |      | \$11,385                   |
| 4                       | 816209 | Interior Door, Solid Core, Painted/Stained, Interior Door, Replace   | 20             | 1    | 19  | 8        | EA   | \$1,423.11 | \$11,385  |         |      |           |           |          |          |         |         |          |         |      |      |      |      |           |         |          |          | \$11,385  |      | \$11,385                   |
| 4                       | 813729 | Toilet Partitions, Metal, Overhead Braced, Replace                   | 20             | 16   | 4   | 16       | EA   | \$850.00   | \$13,600  |         |      |           |           | \$13,600 |          |         |         |          |         |      |      |      |      |           |         |          |          |           |      | \$13,600                   |
| 4                       | 813732 | Interior Stairs/Ramp, Interior Stairs, Replace                       | 30             | 18   | 12  | 72       | SF   | \$45.09    | \$3,247   |         |      |           |           |          |          |         |         |          |         |      |      |      |      |           | \$3,247 |          |          |           |      | \$3,247                    |
| 4                       | 816224 | Interior Walls, Interior Wall, Repair                                | 8              | 5    | 3   | 87950    | SF   | \$1.45     | \$127,615 |         |      |           | \$127,615 |          |          |         |         |          |         |      |      |      |      | \$127,615 |         |          |          | \$127,615 |      | \$127,615                  |
| 4                       | 813772 | Interior Walls, Fiberglass Reinforced, Interior Wall Panels, Replace | 20             | 17   | 3   | 3541     | SF   | \$3.86     | \$13,654  |         |      |           | \$13,654  |          |          |         |         |          |         |      |      |      |      |           |         |          |          |           |      | \$13,654                   |
| 4                       | 816246 | Interior Walls, Interior Wall, Repair                                | 8              | 1    | 7   | 5000     | SF   | \$1.42     | \$7,116   |         |      |           |           |          |          |         | \$7,116 |          |         |      |      |      |      |           |         | \$7,116  |          |           |      | \$7,116                    |
| 4                       | 813718 | Interior Walls, Interior Wall Finish, Replace                        | 25             | 13   | 12  | 980      | SF   | \$16.55    | \$16,223  |         |      |           |           |          |          |         |         |          |         |      |      |      |      |           |         | \$16,223 |          |           |      | \$16,223                   |
| 4                       | 813785 | Floor Finishings, , Replace  | 10             | 4    | 6   | 390      | SF   | \$8.74     | \$3,409   |         |      |           |           |          |          | \$3,409 |         |          |         |      |      |      |      |           |         |          |          | \$3,409   |      | \$3,409                    |
| 4                       | 813697 | Floor Finishings, , Repair   | 10             | 7    | 3   | 2862     | SF   | \$3.68     | \$10,525  |         |      |           | \$10,525  |          |          |         |         |          |         |      |      |      |      |           |         | \$10,525 |          |           |      | \$10,525                   |
| 4                       | 813760 | Floor Finishings, , Replace  | 15             | 5    | 10  | 32950    | SF   | \$4.80     | \$158,180 |         |      |           |           |          |          |         |         |          |         |      |      |      |      | \$158,180 |         |          |          |           |      | \$158,180                  |
| 4                       | 816236 | Interior Floor Finish, Vinyl Tile (VCT), Replace                     | 15             | 1    | 14  | 2000     | SF   | \$4.80     | \$9,601   |         |      |           |           |          |          |         |         |          |         |      |      |      |      |           |         |          | \$9,601  |           |      | \$9,601                    |
| 4                       | 813749 | Floor Finishings, , Replace  | 50             | 35   | 15  | 957      | SF   | \$15.76    | \$15,078  |         |      |           |           |          |          |         |         |          |         |      |      |      |      |           |         |          | \$15,078 |           |      | \$15,078                   |
| 4                       | 813738 | Floor Finishings, Standard Commercial, Medium Traffic, Replace       | 10             | 6    | 4   | 5678     | SF   | \$7.26     | \$41,201  |         |      |           |           | \$41,201 |          |         |         |          |         |      |      |      |      |           |         |          | \$41,201 |           |      | \$41,201                   |
| 4                       | 813701 | Ceilings, Ceiling, Repair  | 10             | 6    | 4   | 900      | SF   | \$1.94     | \$1,743   |         |      |           |           | \$1,743  |          |         |         |          |         |      |      |      |      |           |         |          | \$1,743  |           |      | \$1,743                    |
| 4                       | 813755 | Ceilings, Ceiling, Repair  | 10             | 6    | 4   | 1450     | SF   | \$1.94     | \$2,808   |         |      |           |           | \$2,808  |          |         |         |          |         |      |      |      |      |           |         |          | \$2,808  |           |      | \$2,808                    |

| EMG<br>Renamed<br>Item<br>Number | ID     | Cost Description  | Lifespan<br>(EUL) | EAge | RUL | Quantity | Unit | Unit Cost    | Subtotal  | 2018     | 2019 | 2020     | 2021     | 2022    | 2023     | 2024    | 2025     | 2026     | 2027     | 2028      | 2029 | 2030    | 2031     | 2032     | 2033 | 2034    | 2035      | 2036    | 2037 | Deficiency<br>Repair<br>Estimate |
|----------------------------------|--------|---|-------------------|------|-----|----------|------|--------------|-----------|----------|------|----------|----------|---------|----------|---------|----------|----------|----------|-----------|------|---------|----------|----------|------|---------|-----------|---------|------|----------------------------------|
| 4                                | 813737 | Ceilings, , Replace   | 30                | 20   | 10  | 4008     | SF   | \$9.22       | \$36,970  |          |      |          |          |         |          |         |          |          |          | \$36,970  |      |         |          |          |      |         |           |         |      | \$36,970                         |
| 4                                | 813709 | Ceilings, , Replace   | 20                | 17   | 3   | 22450    | SF   | \$3.11       | \$69,842  |          |      |          | \$69,842 |         |          |         |          |          |          |           |      |         |          |          |      |         |           |         |      | \$69,842                         |
| 4                                | 813728 | Ceilings, , Replace   | 20                | 13   | 7   | 9356     | SF   | \$3.11       | \$29,107  |          |      |          |          |         |          |         | \$29,107 |          |          |           |      |         |          |          |      |         |           |         |      | \$29,107                         |
| 4                                | 813776 | Ceilings, , Replace   | 20                | 2    | 18  | 1211     | SF   | \$3.11       | \$3,767   |          |      |          |          |         |          |         |          |          |          |           |      |         |          |          |      |         |           | \$3,767 |      | \$3,767                          |
| 4                                | 816208 | Interior Ceiling Finish, Suspended Acoustical Tile (ACT), Replace | 20                | 1    | 19  | 2000     | SF   | \$3.11       | \$6,222   |          |      |          |          |         |          |         |          |          |          |           |      |         |          |          |      |         |           | \$6,222 |      | \$6,222                          |
| 5                                | 813756 | Toilet, , Replace   | 20                | 13   | 7   | 31       | EA   | \$842.97     | \$26,132  |          |      |          |          |         |          |         | \$26,132 |          |          |           |      |         |          |          |      |         |           |         |      | \$26,132                         |
| 5                                | 813781 | Urinal, Vitreous China, Replace                                   | 20                | 18   | 2   | 5        | EA   | \$1,193.44   | \$5,967   |          |      | \$5,967  |          |         |          |         |          |          |          |           |      |         |          |          |      |         |           |         |      | \$5,967                          |
| 5                                | 813783 | Service Sink, Floor, Replace                                      | 35                | 28   | 7   | 2        | EA   | \$1,599.51   | \$3,199   |          |      |          |          |         |          |         | \$3,199  |          |          |           |      |         |          |          |      |         |           |         |      | \$3,199                          |
| 5                                | 813745 | Sink, Plastic, Replace  | 20                | 12   | 8   | 1        | EA   | \$575.99     | \$576     |          |      |          |          |         |          |         |          | \$576    |          |           |      |         |          |          |      |         |           |         |      | \$576                            |
| 5                                | 813775 | Sink, Stainless Steel, Replace                                    | 20                | 12   | 8   | 25       | EA   | \$1,054.05   | \$26,351  |          |      |          |          |         |          |         |          | \$26,351 |          |           |      |         |          |          |      |         |           |         |      | \$26,351                         |
| 5                                | 813757 | Sink, Vitreous China, Replace                                     | 20                | 11   | 9   | 22       | EA   | \$861.51     | \$18,953  |          |      |          |          |         |          |         |          |          | \$18,953 |           |      |         |          |          |      |         |           |         |      | \$18,953                         |
| 5                                | 813752 | Sink, Pot, Multi-compartment, Replace                             | 30                | 15   | 15  | 1        | LF   | \$1,262.50   | \$1,263   |          |      |          |          |         |          |         |          |          |          |           |      |         |          | \$1,263  |      |         |           |         |      | \$1,263                          |
| 5                                | 813720 | Drinking Fountain, Vitreous China, Replace                        | 15                | 10   | 5   | 2        | EA   | \$1,938.99   | \$3,878   |          |      |          |          |         | \$3,878  |         |          |          |          |           |      |         |          |          |      |         |           |         |      | \$3,878                          |
| 5                                | 813726 | Drinking Fountain, Refrigerated, Replace                          | 10                | 5    | 5   | 5        | EA   | \$1,257.51   | \$6,288   |          |      |          |          |         | \$6,288  |         |          |          |          |           |      |         |          | \$6,288  |      |         |           |         |      | \$6,288                          |
| 5                                | 813769 | Drinking Fountain, Refrigerated, Replace                          | 10                | 2    | 8   | 1        | EA   | \$1,257.51   | \$1,258   |          |      |          |          |         |          |         | \$1,258  |          |          |           |      |         |          |          |      |         | \$1,258   |         |      | \$1,258                          |
| 5                                | 813748 | Emergency Eye Wash, , Replace                                     | 15                | 11   | 4   | 1        | EA   | \$1,417.04   | \$1,417   |          |      |          |          | \$1,417 |          |         |          |          |          |           |      |         |          |          |      |         |           | \$1,417 |      | \$2,834                          |
| 5                                | 813743 | Water Heater, 80, Replace   | 15                | 12   | 3   | 1        | EA   | \$10,698.82  | \$10,699  |          |      |          | \$10,699 |         |          |         |          |          |          |           |      |         |          |          |      |         | \$10,699  |         |      | \$21,398                         |
| 5                                | 813774 | Water Pumps, 0.5, Replace   | 20                | 12   | 8   | 1        | EA   | \$3,414.40   | \$3,414   |          |      |          |          |         |          |         |          | \$3,414  |          |           |      |         |          |          |      |         |           |         |      | \$3,414                          |
| 5                                | 816260 | Water Heater, Gas, Commercial, 60 to 120 GAL, Replace             | 15                | 6    | 9   | 1        | EA   | \$10,698.82  | \$10,699  |          |      |          |          |         |          |         |          |          | \$10,699 |           |      |         |          |          |      |         |           |         |      | \$10,699                         |
| 5                                | 813788 | Water Heater, Electric, Residential, 16 to 29 GAL, Replace        | 15                | 5    | 10  | 1        | EA   | \$1,249.92   | \$1,250   |          |      |          |          |         |          |         |          |          | \$1,250  |           |      |         |          |          |      |         |           |         |      | \$1,250                          |
| 5                                | 813770 | Gas Distribution System, 1, Replace                               | 20                | 17   | 3   | 1        | EA   | \$6,611.73   | \$6,612   |          |      |          | \$6,612  |         |          |         |          |          |          |           |      |         |          |          |      |         |           |         |      | \$6,612                          |
| 5                                | 813719 | Gas Distribution System, , Replace                                | 15                | 12   | 3   | 1        | EA   | \$5,077.01   | \$5,077   |          |      |          | \$5,077  |         |          |         |          |          |          |           |      |         |          |          |      |         | \$5,077   |         |      | \$10,154                         |
| 5                                | 813768 | Gas Distribution System, 1.5, Replace                             | 20                | 17   | 3   | 1        | EA   | \$6,611.73   | \$6,612   |          |      |          | \$6,612  |         |          |         |          |          |          |           |      |         |          |          |      |         |           |         |      | \$6,612                          |
| 5                                | 813786 | Boiler, Gas, 2,501 to 4,200 MBH, Replace                          | 25                | 7    | 18  | 1        | EA   | \$120,905.15 | \$120,905 |          |      |          |          |         |          |         |          |          |          |           |      |         |          |          |      |         | \$120,905 |         |      | \$120,905                        |
| 5                                | 813766 | Boiler, Gas, 2,501 to 4,200 MBH, Replace                          | 25                | 7    | 18  | 1        | EA   | \$120,905.15 | \$120,905 |          |      |          |          |         |          |         |          |          |          |           |      |         |          |          |      |         | \$120,905 |         |      | \$120,905                        |
| 5                                | 813713 | Boiler Room Piping System, 300, Replace                           | 25                | 11   | 14  | 1        | EA   | \$10,642.24  | \$10,642  |          |      |          |          |         |          |         |          |          |          |           |      |         | \$10,642 |          |      |         |           |         |      | \$10,642                         |
| 5                                | 816226 | Split System, 4, Replace  | 15                | 13   | 2   | 1        | EA   | \$4,619.82   | \$4,620   |          |      | \$4,620  |          |         |          |         |          |          |          |           |      |         |          |          |      |         | \$4,620   |         |      | \$9,240                          |
| 5                                | 816235 | Split System, 3, Replace  | 15                | 10   | 5   | 1        | EA   | \$3,578.67   | \$3,579   |          |      |          |          |         | \$3,579  |         |          |          |          |           |      |         |          |          |      |         |           |         |      | \$3,579                          |
| 5                                | 813762 | Fan Coil Unit, 800, Replace                                       | 15                | 67   | 0   | 12       | EA   | \$2,198.58   | \$26,383  | \$26,383 |      |          |          |         |          |         |          |          |          |           |      |         |          | \$26,383 |      |         |           |         |      | \$52,766                         |
| 5                                | 816206 | Air Handler, Interior, 10,001 to 15,000 CFM, Replace              | 30                | 28   | 2   | 1        | EA   | \$41,979.17  | \$41,979  |          |      | \$41,979 |          |         |          |         |          |          |          |           |      |         |          |          |      |         |           |         |      | \$41,979                         |
| 5                                | 813734 | Fan Coil Unit, 1200, Replace                                      | 15                | 10   | 5   | 10       | EA   | \$4,986.01   | \$49,860  |          |      |          |          |         | \$49,860 |         |          |          |          |           |      |         |          |          |      |         |           |         |      | \$49,860                         |
| 5                                | 813703 | Fan Coil Unit, 401 - 800, Replace                                 | 15                | 10   | 5   | 8        | EA   | \$2,198.58   | \$17,589  |          |      |          |          |         | \$17,589 |         |          |          |          |           |      |         |          |          |      |         |           |         |      | \$17,589                         |
| 5                                | 813751 | HVAC System Ductwork, Sheet Metal, Replace                        | 30                | 20   | 10  | 11258    | SF   | \$15.00      | \$168,870 |          |      |          |          |         |          |         |          |          |          | \$168,870 |      |         |          |          |      |         |           |         |      | \$168,870                        |
| 5                                | 813764 | Fan Coil Unit, 800, Replace                                       | 15                | 2    | 13  | 1        | EA   | \$2,198.58   | \$2,199   |          |      |          |          |         |          |         |          |          |          |           |      | \$2,199 |          |          |      |         |           |         |      | \$2,199                          |
| 5                                | 816207 | Exhaust Fan, 800, Replace   | 15                | 13   | 2   | 1        | EA   | \$2,021.87   | \$2,022   |          |      | \$2,022  |          |         |          |         |          |          |          |           |      |         |          |          |      | \$2,022 |           |         |      | \$4,044                          |
| 5                                | 816221 | Exhaust Fan, 500, Replace   | 15                | 12   | 3   | 1        | EA   | \$1,557.32   | \$1,557   |          |      |          | \$1,557  |         |          |         |          |          |          |           |      |         |          |          |      |         | \$1,557   |         |      | \$3,115                          |
| 5                                | 816215 | Exhaust Fan, 500, Replace   | 15                | 12   | 3   | 1        | EA   | \$1,557.32   | \$1,557   |          |      |          | \$1,557  |         |          |         |          |          |          |           |      |         |          |          |      |         | \$1,557   |         |      | \$3,115                          |
| 5                                | 816220 | Exhaust Fan, 500, Replace   | 15                | 12   | 3   | 1        | EA   | \$1,557.32   | \$1,557   |          |      |          | \$1,557  |         |          |         |          |          |          |           |      |         |          |          |      |         | \$1,557   |         |      | \$3,115                          |
| 5                                | 816252 | Exhaust Fan, 500, Replace   | 15                | 12   | 3   | 1        | EA   | \$1,557.32   | \$1,557   |          |      |          | \$1,557  |         |          |         |          |          |          |           |      |         |          |          |      |         | \$1,557   |         |      | \$3,115                          |
| 5                                | 816263 | Exhaust Fan, 500, Replace   | 15                | 12   | 3   | 1        | EA   | \$1,557.32   | \$1,557   |          |      |          | \$1,557  |         |          |         |          |          |          |           |      |         |          |          |      |         | \$1,557   |         |      | \$3,115                          |
| 5                                | 816255 | Exhaust Fan, 500, Replace   | 15                | 12   | 3   | 1        | EA   | \$1,557.32   | \$1,557   |          |      |          | \$1,557  |         |          |         |          |          |          |           |      |         |          |          |      |         | \$1,557   |         |      | \$3,115                          |
| 5                                | 816216 | Exhaust Fan, 500, Replace   | 15                | 12   | 3   | 1        | EA   | \$1,557.32   | \$1,557   |          |      |          | \$1,557  |         |          |         |          |          |          |           |      |         |          |          |      |         | \$1,557   |         |      | \$3,115                          |
| 5                                | 816239 | Exhaust Fan, 500, Replace   | 15                | 12   | 3   | 1        | EA   | \$1,557.32   | \$1,557   |          |      |          | \$1,557  |         |          |         |          |          |          |           |      |         |          |          |      |         | \$1,557   |         |      | \$3,115                          |
| 5                                | 816217 | Exhaust Fan, 500, Replace   | 15                | 12   | 3   | 1        | EA   | \$1,557.32   | \$1,557   |          |      |          | \$1,557  |         |          |         |          |          |          |           |      |         |          |          |      |         | \$1,557   |         |      | \$3,115                          |
| 5                                | 816222 | Exhaust Fan, 500, Replace   | 15                | 10   | 5   | 1        | EA   | \$1,557.32   | \$1,557   |          |      |          |          |         | \$1,557  |         |          |          |          |           |      |         |          |          |      |         |           |         |      | \$1,557                          |
| 5                                | 816245 | Exhaust Fan, 500, Replace   | 15                | 8    | 7   | 1        | EA   | \$1,557.32   | \$1,557   |          |      |          |          |         |          | \$1,557 |          |          |          |           |      |         |          |          |      |         |           |         |      | \$1,557                          |
| 5                                | 816262 | Exhaust Fan, 500, Replace   | 15                | 2    | 13  | 1        | EA   | \$1,557.32   | \$1,557   |          |      |          |          |         |          |         |          |          |          |           |      | \$1,557 |          |          |      |         |           |         |      | \$1,557                          |
| 5                                | 813716 | Circulation Pump, 5, Replace                                      | 20                | 11   | 9   | 1        | EA   | \$5,518.88   | \$5,519   |          |      |          |          |         |          |         |          |          | \$5,519  |           |      |         |          |          |      |         |           |         |      | \$5,519                          |

[illegible]

| EMG   | Renamed ID | Cost Description                                      | Lifespan (EUL) | EAge | RUL | Quantity | Unit | Unit Cost  | Subtotal | 2018     | 2019      | 2020        | 2021        | 2022      | 2023      | 2024    | 2025     | 2026      | 2027      | 2028        | 2029      | 2030     | 2031      | 2032      | 2033      | 2034    | 2035     | 2036      | 2037      | Deficiency Repair Estimate |     |     |
|---|------------|---|----------------|------|-----|----------|------|------------|----------|----------|-----------|-------------|-------------|-----------|-----------|---------|----------|-----------|-----------|-------------|-----------|----------|-----------|-----------|-----------|---------|----------|-----------|-----------|----------------------------|-----|-----|
|   | 845462     | Play Surfaces & Sports Courts, Asphalt, Seal & Stripe | 5              | 3    | 2   | 5300     | SF   | \$0.38     | \$2,017  |          |           | \$2,017     |             |           |           |         | \$2,017  |           |           |             |           | \$2,017  |           |           |           |         | \$2,017  |           |           | \$8,067                    |     |     |
|   | 845457     | Engineer, Structural, General, Design                 | 0              | 0    | 0   | 1        | EA   | \$6,500.00 | \$6,500  | \$6,500  |           |             |             |           |           |         |          |           |           |             |           |          |           |           |           |         |          |           |           | \$6,500                    |     |     |
| Totals, Unescalated                                     |            |   |                |      |     |          |      |            |          | \$44,855 | \$389,843 | \$1,444,241 | \$1,021,599 | \$282,520 | \$468,293 | \$3,409 | \$69,127 | \$99,560  | \$89,938  | \$1,843,189 | \$127,615 | \$57,147 | \$107,372 | \$85,934  | \$69,824  | \$3,409 | \$8,658  | \$315,919 | \$223,670 | \$6,756,122                |     |     |
| Location Factor (1.00)                                  |            |   |                |      |     |          |      |            |          | \$0      | \$0       | \$0         | \$0         | \$0       | \$0       | \$0     | \$0      | \$0       | \$0       | \$0         | \$0       | \$0      | \$0       | \$0       | \$0       | \$0     | \$0      | \$0       | \$0       | \$0                        | \$0 | \$0 |
| Totals, Escalated (3.0% inflation, compounded annually) |            |   |                |      |     |          |      |            |          | \$44,855 | \$401,539 | \$1,532,195 | \$1,116,329 | \$317,979 | \$542,880 | \$4,070 | \$85,018 | \$126,120 | \$117,349 | \$2,477,091 | \$176,650 | \$81,479 | \$157,679 | \$129,982 | \$108,783 | \$5,470 | \$14,311 | \$537,831 | \$392,208 | \$8,369,816                |     |     |

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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:  | 3550 Pittsview Drive<br>Ann Arbor, Michigan 48108  |
| Year Constructed/Renovated:   | 1951, Phase I / 2016 Phase II  |
| Current Occupants:  | Ann Arbor Public Schools   |
| Percent Utilization:  | 100  |
| Management Point of Contact:  | Jim Vibbart<br>734.320.3613 phone  |
| Property Type:  | Classrooms   |
| Site Area:  | 10 acres   |
| Building Area:  | 43,435 SF  |
| Number of Buildings:  | 2  |
| Number of Stories:  | 1  |
| Parking Type and Number of Spaces:  | 49 spaces in open lots,  |
| Building Construction:  | Masonry bearing walls, concrete slab on grade, with steel bar joist roof and metal decking..   |
| Roof Construction:  | Gabled roofs with asphalt shingles.<br>Flat roofs with built-up membrane.  |
| Exterior Finishes:  | Brick Veneer   |
| Heating, Ventilation & Air Conditioning:  | Central system with boilers, fan coils, air handler, hydronic baseboard radiators and cabinets.<br>Individual package units on roof and split-systems.<br>Supplemental components: package units in building addition. |
| Fire and Life/Safety:   | Smoke detectors, alarms, strobes, extinguishers, pull stations, alarm panel, exit signs.   |
| ADA :   | This building does not have any major ADA issues   |
| All 43,435 square feet of the building are occupied by a single occupant, Ann Arbor Public Schools. The spaces are mostly, classrooms, and supporting restrooms, administrative offices, mechanical and other utility spaces. |  |
| Assessment Information  |  |
| Dates of Visit:   | January 15, 2018 and January 16, 2018  |
| On-Site Point of Contact (POC):   | Jim Vibbart  |
| Assessment and Report Prepared by:  | Benjamin Huseman   |

| Property Information |   |
|----------------------|---|
| Reviewed by:         | Al Diefert<br>Technical Report Reviewer<br>For<br>Andrew Hupp<br>Program Manager<br><a href="mailto:arhupp@emgcorp.com">arhupp@emgcorp.com</a><br>800.733.0660 x 6632 |

## 1.2. Key Findings

**Site :** The parking lot and drive way need to be milled and overlaid with new asphalt. The playground equipment shows signs of corrosion.

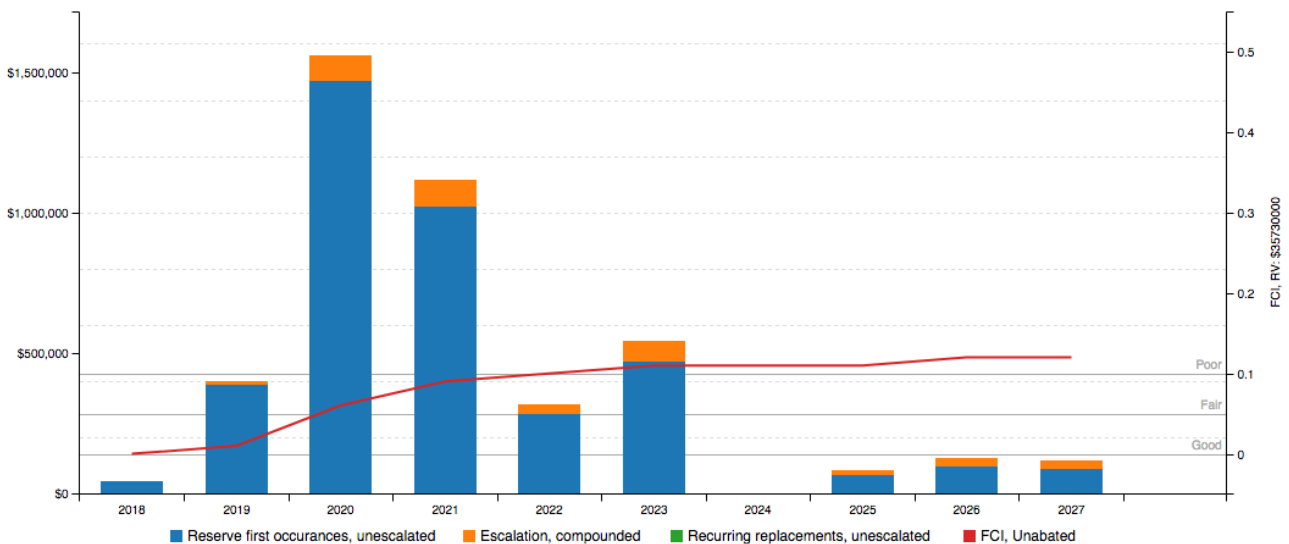
**Architectural :** The brick veneer is in poor condition with multiple areas of deteriorated mortar. The concrete slab on grade has cracks and cracks have formed on the CMU blocks. A professional engineer must be retained to design a fire suppression system, provide recommendations and, if necessary, estimate the scope and cost of installation. The cost of this study is included in the cost tables. A professional engineer must be retained to examine the cracks in the concrete slab on grade, and CMU blocks. A cost allowance to repair brick veneer is also included in the cost tables

**MEPF :** The original fan coil units that were installed in the facility have failed and should be replaced. The BAS system is a hybrid of DDC and pneumatic and should be replaced. The facility does not have a fire suppression system, and only four certified fire extinguishers in the entire facility.

## 1.3. Facility Condition Index (FCI)

### FCI Analysis: Mitchell Elementary

Replacement Value: \$ 35,730,000; 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 Condition Rating | Definition   | Percentage Value  |
|----------------------|--|-------------------|
| Good                 | In new or well-maintained condition, with no visual evidence of wear, soiling or other deficiencies. | 0 to .05          |
| 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) $FCI = (RR)/(CRV)$ :      | 12.08%       |
| 10-Year FCI Rating   | 0.12         |
| Current Replacement Value (CRV):                                 | \$35,730,000 |
| Year 0 (Current Year) - Immediate Repairs (IR):                  | \$44,855     |
| Years 1-10 - Replacement Reserves (RR):                          | \$4,270,270  |
| Total Capital Needs:   | \$4,315,125  |

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 | Fair      |
| Basement and Crawl Space | None                                 | NA        |

#### Anticipated Lifecycle Replacements

- No components of significance

#### Actions/Comments:

- The foundations and footings cannot be directly observed. However, there are isolated areas of cracking, movement, and vertically displaced slabs in the utility closet. Cracking of the CMU walls in the building interior indicate settling has occurred.. This condition typically indicates excessive settlement or other potential problems with the foundation system. A Professional Engineer with specific expertise in structural design and construction in this geographical area must be retained to evaluate the structure and to provide remedial recommendations consistent with local regulatory and code requirements. Although the estimated cost of repair cannot be accurately determined without the recommended study, a budgetary cost allowance to repair the affected elements is also included.

### B10 Superstructure

| B1010 Floor Construction & B1020 Roof Construction |                       |           |
|--|-----------------------|-----------|
| Item   | Description           | Condition |
| Framing / Load-Bearing Walls                       | Masonry walls         | Fair      |
| Ground Floor                                       | Concrete slab         | Fair      |
| Upper Floor Framing                                | Steel beams           | Fair      |
| Upper Floor Decking                                | Metal decking         | Fair      |
| Balcony Framing                                    | None                  | NA        |
| Balcony Decking                                    | None                  | NA        |
| Balcony Deck Toppings                              | None                  | NA        |
| Balcony Guardrails                                 | None                  | NA        |
| Roof Framing                                       | Open-web steel joists | Fair      |
| Roof Decking                                       | Metal decking         | Fair      |

| Maintenance Issues   |                                     |                             |                                     |
|----------------------|-------------------------------------|-----------------------------|-------------------------------------|
| Observation          | Exists At Site                      | Observation                 | Exists At Site                      |
| Caulk minor cracking | <input checked="" type="checkbox"/> | Monitor cracking for growth | <input checked="" 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. There is isolated evidence of deflection and movement illustrated by cracks in the CMU wall. A Professional Engineer with specific expertise in structural design and construction in this geographical area must be retained to evaluate the structure and to provide remedial recommendations consistent with local regulatory and code requirements.

### 3. Building Envelope

#### B20 Exterior Vertical Enclosures

| B2010 Exterior Walls |   |           |
|----------------------|---|-----------|
| Type                 | Location  | Condition |
| Primary Finish       | Brick veneer  | Fair      |
| Secondary Finish     | Metal siding  | Good      |
| Accented with        | Metal siding  | Fair      |
| Soffits              | Not Applicable  | --        |
| Building sealants    | Between dissimilar materials, at joints, around windows and doors | Fair      |

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

#### Anticipated Lifecycle Replacements:

- No components of significance

#### Actions/Comments:

- Significant portions of the mortar joints along the brick veneer are cracked on all elevations of the facility. The damaged mortar joints must be cleaned and re-pointed.

| B2020 Exterior Windows     |              |                     |                                     |           |
|----------------------------|--------------|---------------------|-------------------------------------|-----------|
| Window Framing             | Glazing      | Location            | Window Screen                       | Condition |
| Aluminum framed storefront | Double glaze | Throughout Facility | <input checked="" type="checkbox"/> | Fair      |
| Aluminum framed, operable  | Double glaze | Throughout Facility | <input checked="" type="checkbox"/> | Fair      |
| Aluminum framed, fixed     | Single glaze | Throughout Facility | <input type="checkbox"/>            | Fair      |
| Aluminum framed, operable  | Double glaze | Building Addition   | <input checked="" type="checkbox"/> | Good      |

| B2050 Exterior Doors     |                            |           |
|--------------------------|----------------------------|-----------|
| Main Entrance Doors      | Door Type                  | Condition |
|                          | Fully glazed, metal framed | Fair      |
| Secondary Entrance Doors | Metal, insulated           | Fair      |

|                |                  |      |
|----------------|------------------|------|
| Service Doors  | Metal, insulated | Fair |
| Overhead Doors | None             | NA   |

**Anticipated Lifecycle Replacements:**

- Windows
- Storefront glazing
- Exterior steel doors
- Exterior glazed doors
- Window sealants

**Actions/Comments:**

- There are a few rusted doors and door frames. The damaged doors must be replaced.

| B3010 Primary Roof |             |                      |                   |
|--------------------|-------------|----------------------|-------------------|
| Location           | Throughout  | Finish               | Built-up membrane |
| Type / Geometry    | Flat        | Roof Age             | 18 Yrs            |
| Flashing           | Membrane    | Warranties           | Unknown           |
| Parapet Copings    | None        | Roof Drains          | Internal drains   |
| Fascia             | Metal Panel | Insulation           | None              |
| Soffits            | None        | Skylights            | No                |
| Attics             | None        | Ventilation Source-1 | None              |
| Roof Condition     | Fair        | Ventilation Source-2 | None              |

| B3010 Secondary Roof |                    |                      |                         |
|----------------------|--------------------|----------------------|-------------------------|
| Location             | Center of building | Finish               | Asphalt shingles        |
| Type / Geometry      | Gable Roof         | Roof Age             | 20 Yrs                  |
| Flashing             | Sheet metal        | Warranties           | Unknown                 |
| Parapet Copings      | None               | Roof Drains          | Edge drainage to ground |
| Fascia               | Wood               | Insulation           | None                    |
| Soffits              | None               | Skylights            | No                      |
| Attics               | None               | Ventilation Source-1 | None                    |
| Roof Condition       | Fair               | Ventilation Source-2 | None                    |

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

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

| Degredation Issues            |                          |                       |                          |
|-------------------------------|--------------------------|-----------------------|--------------------------|
| Observation                   | Exists At Site           | Observation           | Exists At Site           |
| Evidence of roof leaks        | <input type="checkbox"/> | Significant ponding   | <input 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:**

- Asphalt shingles
- Built-up roof membrane

**Actions/Comments:**

- The roof finishes appear to be more than 15 years old. Information regarding roof warranties or bonds was not available.
- According to the POC, there are no active roof leaks. There is no evidence of active roof leaks.
- 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.

## 4. Interiors

### C10 Interior Construction

| C1030 Interior Doors |                   |           |
|----------------------|-------------------|-----------|
| Item                 | Type              | Condition |
| Interior Doors       | Steel, Solid Core | Fair      |
| Door Framing         | Metal             | Fair      |
| Fire Doors           | Yes               | Fair      |
| Closet Doors         |                   | --        |

| Maintenance Issues                |                          |                             |                          |
|-----------------------------------|--------------------------|-----------------------------|--------------------------|
| Observation                       | Exists At Site           | Observation                 | 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"/> |

C2010 Wall Finishes; C2030 Floor Finishes; C2050 Ceiling Finishes: The following table generally describes the locations and typical conditions of the interior finishes within the facility:

#### Interior Finishes - Mitchell Elementary School

| Location/Space      | Finish   |   | Quantity (SF) | Condition | Action          | RUL | Est Cost |
|---------------------|----------|---|---------------|-----------|-----------------|-----|----------|
| Classrooms          | Ceilings | Wood                                      | 4008          | Fair      | Replace         | 10  | 36,970   |
| Gymnasium           | Walls    | Plastic Fiberglass-Reinforced Panels      | 3541          | Fair      | Replace         | 3   | 13,654   |
| Gymnasium           | Floor    | Wood Strip                                | 2862          | Fair      | Sand & Refinish | 3   | 10,525   |
| Modular Building    | Walls    | Gypsum Board/Plaster/Metal                | 5000          | Good      | Prep & Paint    | 7   | 7,116    |
| Modular Building    | Floor    | Vinyl Tile (VCT)                          | 2000          | Good      | Replace         | 14  | 9,601    |
| Modular Building    | Ceiling  | Suspended Acoustical Tile (ACT)           | 2000          | Good      | Replace         | 19  | 6,222    |
| Restrooms           | Walls    | Ceramic Tile                              | 500           | Fair      | Replace         | 23  | 8,277    |
| Restrooms           | Floor    | Epoxy Coating                             | 390           | Fair      | Prep & Paint    | 6   | 3,409    |
| Restrooms           | Floor    | Ceramic Tile                              | 957           | Fair      | Replace         | 15  | 15,078   |
| Restrooms           | Ceilings | Gypsum Board/Plaster/Metal                | 900           | Fair      | Prep & Paint    | 4   | 1,743    |
| Throughout building | Walls    | Ceramic Tile                              | 980           | Fair      | Replace         | 12  | 16,223   |
| Throughout building | Walls    | Concrete/Masonry                          | 87950         | Fair      | Prep & Paint    | 3   | 127,615  |
| Throughout building | Floor    | Vinyl Tile (VCT)                          | 32950         | Fair      | Replace         | 10  | 158,180  |
| Throughout building | Floor    | Carpet Standard-Commercial Medium-Traffic | 5678          | Fair      | Replace         | 4   | 41,201   |
| Throughout building | Ceilings | Gypsum Board/Plaster/Metal                | 1450          | Fair      | Prep & Paint    | 4   | 2,808    |
| Throughout building | Ceilings | Suspended Acoustical Tile (ACT)           | 22450         | Fair      | Replace         | 3   | 69,842   |
| Throughout building | Ceilings | Suspended Acoustical Tile (ACT)           | 9356          | Fair      | Replace         | 7   | 29,107   |
| Throughout building | Ceilings | Suspended Acoustical Tile (ACT)           | 1211          | Good      | Replace         | 18  | 3,767    |

| Maintenance Issues       |                          |                                      |                          |
|--------------------------|--------------------------|--------------------------------------|--------------------------|
| Observation              | Exists At Site           | Observation                          | 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
- Ceramic tile
- Interior paint
- Suspended acoustic ceiling tile
- Interior doors

**Actions/Comments:**

- It appears that the interior finishes are original , except for new ceiling tiles in the lobby area, and where the building addition was completed. The remaining interior finishes are old, worn, and outdated. The interior is dark and the ceilings feel low. Complete interior renovations that include comprehensive updating of the interior finishes are recommended.

## 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            | Fair      |
| Water Meter Location              | Building Exterior |           |

| Domestic Water Heaters or Boilers |               |
|-----------------------------------|---------------|
| Components                        | Water Heaters |
| 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   | Fair      |
| Vent Piping             | Cast iron   | Fair      |

| Maintenance Issues                    |                                     |                         |                          |
|---------------------------------------|-------------------------------------|-------------------------|--------------------------|
| Observation                           | Exists At Site                      | Observation             | Exists At Site           |
| Hot water temperature too hot or cold | <input type="checkbox"/>            | Minor or isolated leaks | <input type="checkbox"/> |
| Scale build up on piping exterior     | <input checked="" type="checkbox"/> | Other                   | <input type="checkbox"/> |

**Plumbing Systems - Mitchell Elementary School**

| Location            | Component               | Component Description                       | Quantity | Condition | Action  | RUL | Est Cost  |
|---------------------|-------------------------|---|----------|-----------|---------|-----|-----------|
| Restrooms           | Urinal                  | Vitreous China                              | 5        | Fair      | Replace | 2   | 5,967.20  |
| Building Addition   | Drinking Fountain       | Refrigerated                                | 1        | Good      | Replace | 8   | 1,257.51  |
| Janitor Closet      | Service Sink            | Floor                                       | 2        | Fair      | Replace | 7   | 3,199.02  |
| Janitor Closet      | Water Heater            | Electric, Residential                       | 1        | Fair      | Replace | 10  | 1,249.92  |
| Kitchen             | Sink                    | Pot, Multi-compartment                      | 1        | Fair      | Replace | 15  | 1,262.50  |
| Kitchen             | Emergency Eye Wash      | Emergency Eye Wash                          | 1        | Fair      | Replace | 4   | 1,417.04  |
| Mechanical room     | Sink                    | Plastic                                     | 1        | Fair      | Replace | 8   | 575.99    |
| Mechanical room     | Gas Distribution System | Compressed Air Dryer                        | 1        | Fair      | Replace | 3   | 5,077.01  |
| Mechanical room     | Gas Distribution System | Air Compressor, 2 HP                        | 1        | Fair      | Replace | 3   | 6,611.73  |
| Mechanical room     | Gas Distribution System | Air Compressor, 2 HP                        | 1        | Fair      | Replace | 3   | 6,611.73  |
| Mezzanine           | Water Heater            | Gas, Commercial, 60 to 120 GAL              | 1        | Fair      | Replace | 9   | 10,698.82 |
| Throughout building | Drinking Fountain       | Vitreous China                              | 2        | Fair      | Replace | 5   | 3,877.99  |
| Throughout building | Drinking Fountain       | Refrigerated                                | 5        | Fair      | Replace | 5   | 6,287.54  |
| Utility closet      | Water Heater            | Gas, Commercial, 60 to 120 GAL              | 1        | Fair      | Replace | 3   | 10,698.82 |
| Utility closet      | Water Pumps             | Domestic Circulator or Booster Pump, 0.5 HP | 1        | Fair      | Replace | 8   | 3,414.40  |

**Anticipated Lifecycle Replacements:**

- Circulation pumps
- Water heaters
- Toilets
- Urinals
- Sinks
- Vanities

**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          | Original building area, not including addition |

| Building Central Cooling System |      |
|---------------------------------|------|
| Primary Cooling System Type     | None |
| Refrigerant                     | None |
| Cooling Towers                  | None |
| Location of Major Equipment     | None |
| Space Served by System          | NA   |

| Distribution System            |          |
|--------------------------------|----------|
| HVAC Water Distribution System | Two-pipe |

| Distribution System                     |   |
|---|---|
| Air Distribution System                 | Constant  |
| Location of Air Handlers                | Mezzanine   |
| Terminal Units                          | Fan coil units (hydronic)   |
| Quantity and Capacity of Terminal Units | approximately 30 fan coil units / unit ventilators ranging from 400 to 1200 CFM |
| Location of Terminal Units              | Adjacent to windows   |

| Packaged, Split & Individual Units |                                |
|------------------------------------|--------------------------------|
| Primary Components                 | Package units                  |
| Cooling (if separate from above)   | performed via components above |
| Heating Fuel                       | Natural gas                    |
| Location of Equipment              | Rooftop                        |
| Space Served by System             | Entire building                |

| Supplemental/Secondary Components                        |                               |
|--|-------------------------------|
| Supplemental Component #1                                | Through-wall air conditioners |
| Location / Space Served by Through-wall air conditioners | Newer wing classrooms         |
| Through-wall air conditioners Condition                  | Good                          |
| Supplemental Component #2                                | Split system heat pumps       |
| Location / Space Served by Split system heat pumps       | Office                        |
| Split system heat pumps Condition                        | Fair                          |
| Supplemental Component #3                                | Through-wall air conditioners |
| Location / Space Served by Through-wall air conditioners | Modular building              |
| Through-wall air conditioners Condition                  | Good                          |

| Controls and Ventilation      |   |
|-------------------------------|---|
| HVAC Control System           | BAS, hybrid pneumatic/electronic system |
| HVAC Control System Condition | Poor                                    |
| Controls and Ventilation      |   |
| Building Ventilation          | Roof top exhaust fans                   |
| Ventilation System Condition  | Fair                                    |

| Maintenance Issues           |                          |                                  |                          |
|------------------------------|--------------------------|----------------------------------|--------------------------|
| Observation                  | Exists At Site           | Observation                      | 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"/> |

| Degredation 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 checked="" type="checkbox"/> | Obsolete refrigerants : R11, R12, R22, R123, R502 | <input checked="" type="checkbox"/> |
| Other   | <input type="checkbox"/>            | Other   | <input type="checkbox"/>            |

**Mechanical Systems - Mitchell Elementary School**

| Location            | Component                   | Component Description   | Quantity | Unit | Condition | Action  | RUL | Est Cost   |
|---------------------|-----------------------------|---|----------|------|-----------|---------|-----|------------|
| Building Addition   | Fan Coil Unit               | Hydronic, 401 to 800 CFM  | 1        | EA   | Good      | Replace | 13  | 2,198.58   |
| Building Addition   | Package Unit                | RTU, 4 Ton  | 1        | EA   | Good      | Replace | 13  | 10,581.39  |
| Building Addition   | Package Unit                | RTU, 4 Ton  | 1        | EA   | Good      | Replace | 13  | 10,581.39  |
| Building Addition   | Package Unit                | RTU, 4 Ton  | 1        | EA   | Good      | Replace | 13  | 10,581.39  |
| Building Addition   | Package Unit                | RTU, 4 Ton  | 1        | EA   | Good      | Replace | 13  | 10,581.39  |
| Building Addition   | Package Unit                | RTU, 4 Ton  | 1        | EA   | Good      | Replace | 13  | 10,581.39  |
| Building Addition   | Package Unit                | RTU, 4 Ton  | 1        | EA   | Good      | Replace | 13  | 10,581.39  |
| Classrooms          | Fan Coil Unit               | Hydronic, 1,201 to 1,800 CFM                                    | 10       | EA   | Fair      | Replace | 5   | 49,860.13  |
| Mechanical room     | Boiler                      | Gas, 2,501 to 4,200 MBH   | 1        | EA   | Good      | Replace | 18  | 120,905.15 |
| Mechanical room     | Boiler                      | Gas, 2,501 to 4,200 MBH   | 1        | EA   | Good      | Replace | 18  | 120,905.15 |
| Mechanical room     | Boiler Room Piping System   | Chemical Feed System  | 1        | EA   | Fair      | Replace | 14  | 10,642.24  |
| Mechanical room     | Circulation Pump            | Distribution Pump, Heating Water, 5 HP                          | 1        | EA   | Fair      | Replace | 9   | 5,518.88   |
| Mechanical room     | Circulation Pump            | Distribution Pump, Heating Water, 3 HP                          | 1        | EA   | Fair      | Replace | 13  | 4,652.29   |
| Mechanical room     | Circulation Pump            | Distribution Pump, Heating Water, 3 HP                          | 1        | EA   | Fair      | Replace | 13  | 4,652.29   |
| Mechanical room     | Circulation Pump            | Distribution Pump, Heating Water, 5 HP                          | 1        | EA   | Fair      | Replace | 9   | 5,518.88   |
| Mechanical room     | Unit Heater                 | Hydronic, 161 to 250 MBH  | 1        | EA   | Fair      | Replace | 9   | 4,239.16   |
| Mechanical room     | Unit Heater                 | Hydronic, 101 to 160 MBH  | 1        | EA   | Fair      | Replace | 5   | 2,469.66   |
| Mezzanine           | Air Handler                 | Interior, 10,001 to 15,000 CFM                                  | 1        | EA   | Fair      | Replace | 2   | 62,968.76  |
| Mezzanine           | Exhaust Fan                 | Centrifugal, 251 to 800 CFM                                     | 1        | EA   | Fair      | Replace | 2   | 2,021.87   |
| Modular Building    | PTAC                        | Packaged Terminal Air Conditioner (PTAC), 15,001 to 24,000 BTUH | 1        | EA   | Good      | Replace | 9   | 3,835.99   |
| Modular Building    | PTAC                        | Packaged Terminal Air Conditioner (PTAC), 15,001 to 24,000 BTUH | 1        | EA   | Good      | Replace | 9   | 3,835.99   |
| Modular Building    | PTAC                        | Packaged Terminal Air Conditioner (PTAC), 15,001 to 24,000 BTUH | 1        | EA   | Good      | Replace | 9   | 3,835.99   |
| Modular Building    | PTAC                        | Packaged Terminal Air Conditioner (PTAC), 15,001 to 24,000 BTUH | 1        | EA   | Good      | Replace | 9   | 3,835.99   |
| Modular Building    | PTAC                        | Packaged Terminal Air Conditioner (PTAC), 15,001 to 24,000 BTUH | 1        | EA   | Good      | Replace | 9   | 3,835.99   |
| Roof                | Split System                | Condensing Unit/Heat Pump, 4 Ton                                | 1        | EA   | Fair      | Replace | 2   | 6,929.73   |
| Roof                | Split System                | Condensing Unit/Heat Pump, Split System, 3 Ton                  | 1        | EA   | Fair      | Replace | 5   | 5,368.00   |
| Roof                | Exhaust Fan                 | Roof Mounted, 401 to 500 CFM                                    | 1        | EA   | Fair      | Replace | 3   | 1,557.32   |
| Roof                | Exhaust Fan                 | Roof Mounted, 401 to 500 CFM                                    | 1        | EA   | Fair      | Replace | 3   | 1,557.32   |
| Roof                | Exhaust Fan                 | Roof Mounted, 401 to 500 CFM                                    | 1        | EA   | Fair      | Replace | 3   | 1,557.32   |
| Roof                | Exhaust Fan                 | Roof Mounted, 401 to 500 CFM                                    | 1        | EA   | Fair      | Replace | 3   | 1,557.32   |
| Roof                | Exhaust Fan                 | Roof Mounted, 401 to 500 CFM                                    | 1        | EA   | Fair      | Replace | 5   | 1,557.32   |
| Roof                | Exhaust Fan                 | Roof Mounted, 401 to 500 CFM                                    | 1        | EA   | Fair      | Replace | 7   | 1,557.32   |
| Roof                | Exhaust Fan                 | Roof Mounted, 401 to 500 CFM                                    | 1        | EA   | Fair      | Replace | 3   | 1,557.32   |
| Roof                | Exhaust Fan                 | Roof Mounted, 401 to 500 CFM                                    | 1        | EA   | Good      | Replace | 13  | 1,557.32   |
| Roof                | Exhaust Fan                 | Roof Mounted, 401 to 500 CFM                                    | 1        | EA   | Fair      | Replace | 3   | 1,557.32   |
| Roof                | Unit Heater                 | Natural Gas, 76 to 125 MBH                                      | 1        | EA   | Fair      | Replace | 10  | 5,006.98   |
| Roof                | Package Unit                | RTU, 8 to 10 Ton  | 1        | EA   | Fair      | Replace | 4   | 18,554.44  |
| Roof                | Package Unit                | RTU, 16 to 20 Ton   | 1        | EA   | Fair      | Replace | 3   | 36,777.37  |
| Roof                | Package Unit                | RTU, 6 to 7.5 Ton   | 1        | EA   | Fair      | Replace | 4   | 14,395.83  |
| Throughout building | Fan Coil Unit               | Hydronic, 401 to 800 CFM  | 8        | EA   | Fair      | Replace | 5   | 17,588.63  |
| Throughout building | HVAC System Ductwork        | Sheet Metal   | 11258    | SF   | Fair      | Replace | 10  | 168,870.00 |
| Throughout building | HVAC System Hydronic Piping | 2-Pipe  | 43435    | SF   | Fair      | Replace | 5   | 282,327.50 |
| Throughout building | Radiator                    | Hydronic Baseboard  | 284      | LF   | Fair      | Replace | 3   | 37,706.68  |
| Throughout building | HVAC Automation/Safety      | Building Automation System (HVAC Controls)                      | 43435    | SF   | Fair      | Upgrade | 2   | 232,920.19 |

**Anticipated Lifecycle Replacements:**

- Boilers
- Air handling units
- Distribution pumps and motors
- Fan coil units
- Package units
- Split system heat pumps
- Baseboard heaters
- Through-wall air conditioners
- Rooftop exhaust fans

**Actions/Comments:**

- The HVAC systems are maintained by an outside contractor.
- The HVAC equipment appears to vary in. HVAC equipment is replaced on an "as needed" basis.
- The HVAC equipment appears to be functioning adequately overall. The maintenance staff, service contractors and principal were interviewed about the historical and recent performance of the equipment and systems.
- The air handlers are original to the 1951 construction and appear to be functioning adequately..

- The facility HVAC is controlled by a hybrid BAS system along with an outdated pneumatic system supplied by an air compressor. The two systems fail to keep the building at desired temperatures. For modernization, reliability, and increased control, full conversion to a web-based direct digital control (DDC) platform is highly recommended.

## D40 Fire Protection

| Item                       | Description                |                                     |                          |                                  |                     |                          |
|----------------------------|----------------------------|-------------------------------------|--------------------------|----------------------------------|---------------------|--------------------------|
| Type                       | None                       |                                     |                          |                                  |                     |                          |
| Sprinkler System           | None                       | <input checked="" 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 | NA                         |                                     |                          |                                  |                     |                          |
| Fire Extinguishers         | Last Service Date          |                                     | Servicing Current?       |                                  |                     |                          |
|                            | July, 2017                 |                                     | Yes                      |                                  |                     |                          |
| Hydrant Location           | On Pittsview Street        |                                     |                          |                                  |                     |                          |
| Siamese Location           | NA                         |                                     |                          |                                  |                     |                          |
| Special Systems            | Kitchen Suppression System |                                     | <input type="checkbox"/> | Computer Room Suppression System |                     | <input type="checkbox"/> |

| Maintenance Issues       |                          |                            |                          |
|--------------------------|--------------------------|----------------------------|--------------------------|
| Observation              | Exists At Site           | Observation                | 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:

- The building is not protected by fire suppression. Due to its construction date, the facility is most likely "grandfathered" by code and the installation of fire sprinklers not required until major renovations are performed. Regardless of when or if installation of facility-wide fire suppression is required by the governing municipality, EMG recommends a retrofit be performed. A budgetary cost is included.
- Fire extinguishers appear to be missing at many locations. New fire extinguishers must be installed at all required locations immediately.

## D50 Electrical

| Distribution & Lighting |          |             |                            |
|-------------------------|----------|-------------|----------------------------|
| Electrical Lines        | Overhead | Transformer | Pad-mounted                |
| Main Service Size       | 800 Amps | Volts       | 120/240 Volt, single-phase |

| Distribution & Lighting                   |                 |                           |        |
|---|-----------------|---------------------------|--------|
| Meter & Panel Location                    | Mechanical Room | Branch Wiring             | Copper |
| Conduit                                   | Metallic        | Step-Down Transformers?   | No     |
| Security / Surveillance System?           | Yes             | Building Intercom System? | Yes    |
| Lighting Fixtures                         | T-8             |                           |        |
| Main Distribution Condition               | Fair            |                           |        |
| Secondary Panel and Transformer Condition | Fair            |                           |        |
| Lighting Condition                        | Fair            |                           |        |

| Maintenance Issues                      |                          |                                  |                          |
|---|--------------------------|----------------------------------|--------------------------|
| Observation                             | Exists At Site           | Observation                      | Exists At Site           |
| Improperly stored material              | <input type="checkbox"/> | Unsecured high voltage area      | <input type="checkbox"/> |
| Loose cables or improper use of conduit | <input type="checkbox"/> | Poor electrical room ventilation | <input type="checkbox"/> |
| Other                                   | <input type="checkbox"/> | Other                            | <input type="checkbox"/> |

**Anticipated Lifecycle Replacements:**

- Circuit breaker panels
- Main switchgear
- Interior light fixtures

**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.

**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 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 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 checked="" 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  | Good                    |                                     |                                  |                                     |                        |                                     |
| Central Alarm Panel System   | Location of Alarm Panel |                                     |                                  | Installation Date of Alarm Panel    |                        |                                     |
|  | Main Office             |                                     |                                  | 2016                                |                        |                                     |

**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. Future lifecycle replacements of the components listed above will be required.

## 6. Equipment & Furnishings

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### 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 is not used for cooking. Food is brought in from a central kitchen and served to students. Equipment is limited to food warmers, and reach-in refrigerators.

***Anticipated Lifecycle Replacements:***

- Reach-in refrigerators
- Food warmers

***Actions/Comments:***

- No significant actions are identified at the present time. On-going periodic maintenance is highly recommended. Future lifecycle replacements of the reach-in refrigerators and food warmers will be required.

## 7. Sitework

### G20 Site Improvements

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

| Parking Count                           |         |                |                     |                                |
|---|---------|----------------|---------------------|--------------------------------|
| Open Lot                                | Carport | Private Garage | Subterranean Garage | Freestanding Parking Structure |
| 49                                      | 0       | 0              | 0                   | 0                              |
| Total Number of ADA Compliant Spaces    |         |                | 2                   |                                |
| Number of ADA Compliant Spaces for Vans |         |                | 2                   |                                |
| Total Parking Spaces                    |         |                | 49                  |                                |

| Site Stairs               |          |           |           |
|---------------------------|----------|-----------|-----------|
| Location                  | Material | Handrails | Condition |
| Modular building entrance | Metal    | Metal     | Good      |

| Maintenance Issues     |                          |   |                          |
|------------------------|--------------------------|---|--------------------------|
| Observation            | Exists At Site           | Observation                               | 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"/> |

| Degredation 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"/> | Transverse cracks                 | <input type="checkbox"/>            |

**Anticipated Lifecycle Replacements:**

- Asphalt seal coating
- Asphalt pavement
- Site stairs
- Pedestrian ramps

**Actions/Comments:**

- The asphalt pavement exhibits significant areas of failure and deterioration, such as alligator cracking, transverse cracking, extensive raveling, heavy overall surface wear, and localized depressions throughout the parking lot and service driveway. All of the paving must be overlaid with new asphalt paving in order to maintain the integrity of the overall pavement system. Milling is recommended as part of the overall repair work.

| G2060 Site Development    |          |
|---------------------------|----------|
| Property Signage          |          |
| Property Signage          | Monument |
| Street Address Displayed? | Yes      |

| Site Fencing                |                       |           |
|-----------------------------|-----------------------|-----------|
| Type                        | Location              | Condition |
| Chain link with metal posts | East side of property | Good      |

| Refuse Disposal    |                       |           |             |           |
|--------------------|-----------------------|-----------|-------------|-----------|
| Refuse Disposal    | Common area dumpsters |           |             |           |
| Dumpster Locations | Mounting              | Enclosure | Contracted? | Condition |
| South side         | Asphalt paving        | None      | Yes         | Fair      |

| Other Site Amenities |                   |                      |           |
|----------------------|-------------------|----------------------|-----------|
|                      | Description       | Location             | Condition |
| Playground Equipment | Plastic and metal | Exterior Playgrounds | Fair      |
| Tennis Courts        | None              | NA                   | NA        |
| Basketball Court     | Asphalt           | Exterior             | Fair      |

| Other Site Amenities |             |          |           |
|----------------------|-------------|----------|-----------|
|                      | Description | Location | Condition |
| Swimming Pool        | None        | NA       | NA        |

**Anticipated Lifecycle Replacements:**

- Signage
- Playground equipment
- Playground surfaces

**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.

| G2080 Landscaping                   |                                     |           |
|-------------------------------------|-------------------------------------|-----------|
| Drainage System and Erosion Control |                                     |           |
| System                              | Exists At Site                      | Condition |
| Surface Flow                        | <input checked="" type="checkbox"/> | Fair      |
| Inlets                              | <input type="checkbox"/>            | --        |
| Swales                              | <input type="checkbox"/>            | --        |
| Detention pond                      | <input checked="" type="checkbox"/> | Good      |
| Lagoons                             | <input type="checkbox"/>            | --        |
| Ponds                               | <input type="checkbox"/>            | --        |
| Underground Piping                  | <input type="checkbox"/>            | --        |
| Pits                                | <input type="checkbox"/>            | --        |
| Municipal System                    | <input type="checkbox"/>            | --        |
| 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 east side of the property to the west property line. |                                     |                          |                          |                          |                          |                          |
| Landscaping           | Trees  | Grass                               | Flower Beds              | Planters                 | Drought Tolerant Plants  | Decorative Stone         | None                     |
|                       | <input checked="" type="checkbox"/>  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Landscaping Condition | Fair   |                                     |                          |                          |                          |                          |                          |

| Item                 | Description              |                          |                          |                                     |
|----------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|
| Irrigation           | Automatic Underground    | Drip                     | Hand Watering            | None                                |
|                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Irrigation Condition | NA                       |                          |                          |                                     |

| 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 along the exterior walls of the building. 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 type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|                     | Good                     |                                     |                          |                          |                                     |

| G4050 Site Lighting |                          |                                     |                          |
|---------------------|--------------------------|-------------------------------------|--------------------------|
| Building Lighting   | None                     | Wall Mounted                        | Recessed Soffit          |
|                     | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|                     | Good                     |                                     |                          |

| Maintenance Issues             |                          |                             |                          |
|--------------------------------|--------------------------|-----------------------------|--------------------------|
| Observation                    | Exists At Site           | Observation                 | 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. Future lifecycle replacements of the components listed above will be required.

## 8. Ancillary Structures

| Modular Trailer           |  |               |                         |
|---------------------------|--|---------------|-------------------------|
| Item                      | Material   | Item          | Material                |
| Exterior Siding           | Fiber Cement   | Roof Finishes | Metal,                  |
| Interior Finishes         | Floor : VCT,<br>Ceiling : Suspended ACT,<br>Walls : Gypsum/Plaster | MEPF          | See Tables in Section 5 |
| Overall Trailer Condition |  |               | Good                    |

### ***Anticipated Lifecycle Replacements:***

- Thru-wall Air Conditioning Units
- Vinyl Cut Tile
- Interior Wall Finish
- Suspended Accousitcal Tile
- Interior Doors

### ***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.

## 9. Opinions of Probable Costs

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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.

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### 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.

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### 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.

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### 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.  |

#### FORMAT OF THE BODY OF THE REPORT:

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 Checklist* provided in Appendix D of this report. 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, other than as shown on the Abbreviated Accessibility Checklist, 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              | Moderate Issue           | Minor Issue              |
| Parking                   | <input type="checkbox"/> | <input type="checkbox"/> | <input 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.

### 11.2. Flood Zone and Seismic Zone

According to the Flood Insurance Rate Map, published by the Federal Emergency Management Agency (FEMA) and dated 2012, the property is located in Zone X, defined as an area outside the 500-year flood plain with less than 0.2% annual probability of flooding. Annual Probability of Flooding of Less than one percent.

According to the 1997 Uniform Building Code Seismic Zone Map of the United States, the property is located in Seismic Zone0, defined as an area of very low probability of damaging ground motion.

## 12. Certification

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Ann Arbor Public Schools retained EMG to perform this Facility Condition Assessment in connection with its continued operation of Mitchell Elementary School, 3550 Pittsview Drive, 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 Ann Arbor Public Schools for the purpose stated within Section 10.1 of this report. The report, or any excerpt thereof, shall not be used by any party other than Ann Arbor Public Schools or for any other purpose than that specifically stated in our agreement or within Section 10.1 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:** Benjamin Huseman,  
Project Manager

**Reviewed by:**



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Al Diefert  
Technical Report Reviewer  
For  
Andrew Hupp  
Program Manager

## 13. Appendices

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

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## **Appendix A: Photographic Record**

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#1:

MAIN ENTRANCE



#2:

FRONT ELEVATION



#3:

RIGHT ELEVATION



#4:

REAR ELEVATION



#5:

LEFT ELEVATION



#6:

EXTERIOR WALL, ALUMINUM  
SIDING



#7:

CRACKED CONCRETE SLAB-  
ON-GRADE

#8:

GYMNASIUM, WOOD FLOOR



#9:

STOREFRONT WINDOWS



#10:

FAN COIL UNIT



#11:

WATER HEATER



#12:

SUSPENDED ACOUSTICAL TILE



|      |                      |
|------|----------------------|
| #13: | PACKAGED UNIT (RTU), |
|------|----------------------|



|      |                       |
|------|-----------------------|
| #14: | BRICK VENEER CRACKING |
|------|-----------------------|



|      |              |
|------|--------------|
| #15: | BRICK VENEER |
|------|--------------|



|      |            |
|------|------------|
| #16: | AUDITORIUM |
|------|------------|



|      |           |
|------|-----------|
| #17: | BREAKROOM |
|------|-----------|



|      |                                    |
|------|------------------------------------|
| #18: | NON-CERTIFIED FIRE<br>EXTINGUISHER |
|------|------------------------------------|



#19:

RESTROOM



#20:

SIDEWALK



#21:

PARKING LOT



#22:

LANDSCAPING



#23:

PLAY SURFACE, ASPHALT



#24:

PLAY STRUCTURE



#25:

SIGNAGE



#26:

BRICK VENEER



#27:

STRUCTURAL WALLS, CMU



#28:

ROOF, BUILT-UP MEMBRANE



#29:

ROOF, ASPHALT SHINGLE



#30:

ROOF DRAINAGE



#31:

WINDOWS, METAL  
STOREFRONT

#32:

EXTERIOR DOORS, GLAZED



#33:

CENTRAL HEATING SYSTEM



#34:

AIR HANDLER



#35:

PACKAGED TERMINAL HEATER



#36:

COMMERCIAL WATER HEATER



#37: SINKS VIRTUOUS CHINA



#38: WATER PIPING SYSTEM,  
DOMESTIC WATER SUPPLY



#39: MOTOR CONTROL CENTER



#40: MAIN DISTRIBUTION PANEL



#41: EXTERIOR LIGHTING



#42: FIRE EXTINGUISHER



|      |                          |
|------|--------------------------|
| #43: | FIRE ALARM CONTROL PANEL |
|------|--------------------------|



|      |                 |
|------|-----------------|
| #44: | CONFERENCE ROOM |
|------|-----------------|



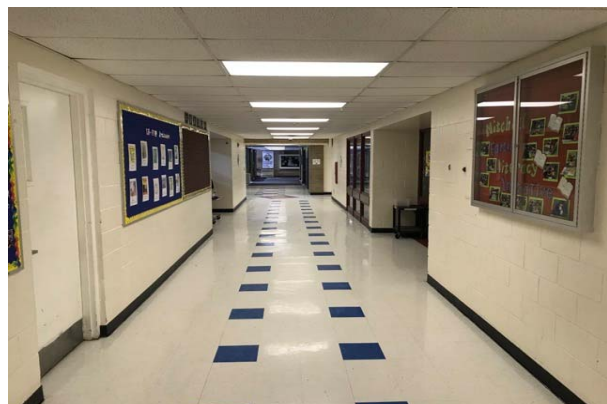
|      |       |
|------|-------|
| #45: | LOBBY |
|------|-------|



|      |        |
|------|--------|
| #46: | OFFICE |
|------|--------|



|      |         |
|------|---------|
| #47: | KITCHEN |
|------|---------|



|      |         |
|------|---------|
| #48: | HALLWAY |
|------|---------|

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## Appendix B: Site Plan

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## Site Plan



**Project Name:**  
Mitchell Elementary

**Source:**  
Google Earth

**Project Number:**  
129010.18R000-002.354

**On-Site Date:**  
January 15 and 16, 2018

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## **Appendix C: Supporting Documentation**

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# Flood Map



**Project Name:**

Mitchell Elementary

**Project Number:**

129010.18R000-002.354

**Source:**

FEMA

**On-Site Date:**

January 15 and 16, 2018

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## **Appendix D: Pre-Survey Questionnaire**

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## FACILITY CONDITION ASSESSMENT: PRE-SURVEY QUESTIONNAIRE

This questionnaire must be completed by the property owner, the owner's designated representative, or someone knowledgeable about the subject property. **The completed form must be presented to EMG's Field Observer on the day of the site visit.** If the form is not completed, EMG's Project Manager will require **additional time** during the on-site visit with such a knowledgeable person in order to complete the questionnaire. During the site visit, EMG's Field Observer may ask for details associated with selected questions. This questionnaire will be utilized as an exhibit in EMG's final Property Condition Report.

Name of person completing form:

Benjamin Huseman

Title / Association with property:

N/A

Length of time associated w/ property:

N/A

Date Completed:

9/16/2018

Phone Number:

417-770-4019

Building / Facility Name:

Mitchell Elementary School

**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 constructed   | <u>1951</u>                       |
| 2             | Building size in SF  | <u>43435</u>                      |
| 3             | Acreage  | <u>10</u>                         |
| 4             | Number of parking spaces   | <u>49</u>                         |
| 5             | Age of roof (known or estimated); active warranty w/ expiration date?  | <u>2000 Estimated</u>             |
| QUESTION      |  | RESPONSE                          |
| 6             | List all major renovations or rehabilitations since construction (with estimated dates).   | <u>Building addition in 2016</u>  |
| 7             | List other somewhat lesser but still significant capital improvements, focused within recent years (provide approximate year completed). | <u>Drop ceiling, HVAC in 2007</u> |
| 8             | List any major capital expenditures planned/requested for the next few years. Have they been budgeted?                                   | <u>None</u>                       |
| 9             | Describe any extremely problematic, historically chronic, or immediate facility needs.   | <u>Needs Fire Suppression</u>     |
| 10            | Describe any shared building or site elements or unique arrangements with neighboring properties, entities, or tenants.                  | <u>None</u>                       |

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 |                         |
| 11       | Are there any unusable or "down" areas, units, or spaces within the facility?                          |          | 2  |     |    |                         |
| 12       | Is the facility served by a private water well, septic system or other special waste treatment system? |          | 2  |     |    |                         |
| 13       | Are there any problems with the utilities, such as inadequate pressure or capacities?                  |          | 2  |     |    |                         |
| 14       | Have there been any leaks or pressure problems with natural gas service?                               |          | 2  |     |    |                         |
| 15       | Are there any problems with erosion or areas with storm water drainage issues?                         |          | 2  |     |    |                         |
| 16       | Are there any problems with the landscape irrigation systems?  |          |    |     | 2  |                         |
| 17       | Are there any problems or inadequacies with exterior lighting?   |          | 2  |     |    |                         |
| 18       | Are there any problems with foundations or structures, like excessive settlement?                      | 2        |    |     |    | Suite 11 water seeps in |
| 19       | Are there any known issues with termites or other wood-boring pests?                                   |          |    |     | 2  |                         |
| 20       | Are there any wall, window, basement or roof leaks?  |          |    |     |    | Roof leaks in the past  |
| 21       | Are there any plumbing leaks or water pressure problems?   |          | 2  |     |    |                         |
| 22       | Are any areas of the facility inadequately heated, cooled or ventilated?                               |          | 2  |     |    |                         |
| 23       | Are there any poorly insulated areas?  |          | 2  |     |    |                         |
| 24       | Do any of the HVAC systems use older R-11, 12, or 22 refrigerants?                                     | 2        |    |     |    |                         |
| 25       | Has any part of the facility ever contained visible suspect mold growth?                               |          | 2  |     |    |                         |
| 26       | Have there been indoor air quality or mold related complaints from building occupants?                 |          |    |     |    |                         |

| Mark the column corresponding to the appropriate response. Please provide additional details in the Comments column, or backup documentation for any <b>Yes</b> responses. ( <b>NA</b> indicates "Not Applicable", <b>Unk</b> indicates "Unknown") |  |          |          |     |    |          |
|--|--|----------|----------|-----|----|----------|
| QUESTION   |  | RESPONSE |          |     |    | COMMENTS |
|  |  | Yes      | No       | Unk | NA |          |
| 27   | Are there any known unresolved building, fire, or zoning code issues with the governing municipality?                                    |          | <i>e</i> |     |    |          |
| 28   | Is there any pending litigation concerning the property?   |          | <i>e</i> |     |    |          |
| 29   | Are there outstanding accessibility issues at the facility? (Go over and fill out first 'History' subsection of separate ADA checklist.) |          | <i>e</i> |     |    |          |
| 30   | Are there any EMG 'red flag' issues at the facility? (Go over and fill out attached checklist below.)                                    |          | <i>e</i> |     |    |          |
| 31   | Are there any other unresolved construction defects or significant issues/hazards at the property that have not yet been identified?     |          | <i>e</i> |     |    |          |

  
 \_\_\_\_\_  
 Signature of person interviewed or completing form

*1/16/2018*  
 \_\_\_\_\_  
 Date

## RED FLAG CHECKLIST & MATRIX

| Mark the <b>single</b> column corresponding to the most appropriate situation. ( <b>PSQ only</b> indicates POC acknowledged presence during interview but item was not observed on-site; <b>OBS only</b> indicates the item was observed but not identified as known to be present during interview process; <b>PSQ &amp; OBS</b> indicates item was both verbally identified and physically observed; <b>NOT EVID</b> indicates the item was neither observed during limited visual assessment nor identified as present during discussions). |  |           |          |           |          |  |
|--|--|-----------|----------|-----------|----------|--|
| RED FLAG ISSUE   |  | OBSERVED? |          |           |          | GUIDANCE   |
|  |  | PSQ only  | OBS only | PSQ & OBS | NOT EVID | most prevalent time of potential use   |
| 1  | Fire Retardant Plywood (FRT)                 |           |          |           |          | 1955 to 1998; as roof sheathing; view attics; sometimes stamped; moisture absorbance leads to premature failure                                      |
| 2  | Engineered / Hardboard Wood Siding           |           |          |           |          | any time; Masonite, T-111; water damage and premature failure  |
| 3  | Exterior Insulation and Finish System (EIFS) |           |          |           |          | any time; water penetration and premature failure (looks like stucco but feels "lighter")  |
| 4  | Galvanized Water Piping                      |           |          |           |          | prior to early 1980's; common in 1970's; pinhole leaks and interior mineral build-up   |
| 5  | Polybutylene Water Piping                    |           |          |           |          | 1977-1995; mostly relevant to housing; grey plastic commonly leaks at joint fittings   |
| 6  | ABS Piping Recall                            |           |          |           |          | 1984-1990; faulty resin by 5 manufactures; very difficult to discover & visually observe   |
| 7  | Cadet/Encore Wall Heater Recall              |           |          |           |          | 1982-1999; mostly relevant to housing; collect & cross-check model numbers; potential fire hazards   |
| 8  | PTAC Recall (Goodman/Amana)                  |           |          |           |          | 1996-2003; mostly relevant to housing; faulty thermal override switch; collect & cross-check model numbers   |
| 9  | Aluminum Wiring (Interior)                   |           |          |           |          | 1964-1975; more concerns with interior and smaller gauge   |
| 10   | Federal Pacific Stab-Lok Electrical Panels   |           |          |           |          | prior to 1986; potential fire hazards  |
| 11   | Fused Electrical Panels                      |           |          |           |          | prior to early 1960's; easily tampered with, as such potential fire hazard   |
| 12   | Low Unit Amperage                            |           |          |           |          | any time; relevant to housing  |
| 13   | Fire Sprinkler Head Recalls                  |           |          |           |          | 1960-2001; more heavily 1990's; Central, Gem, Star, Globe, Omega can be suspect; collect & cross-check model numbers                                 |
| 14   | Dishwasher Recalls                           |           |          |           |          | 1983-1989: GE, Hotpoint<br>1997-2001: GE, Hotpoint, Maytag, Jenn-Air, Kenmore, Eterna<br>collect & cross-check model numbers; potential fire hazards |

## REQUEST FOR DOCUMENTATION

On the day of the site visit, provide EMG's Field Observer the documents listed below. Signify which documents will be copied, available for review at the site, not available, or not applicable by placing a check mark in the appropriate columns. Also provide this completed checklist.

|    |  | Copies<br>Provided | Reviewed<br>at Site | Not<br>Available | Not<br>Applicable |
|----|--|--------------------|---------------------|------------------|-------------------|
| 1  | <b>Maintenance Contractor List.</b> Provide the company name, phone number, and contact person of all maintenance contractors who serve the property, such as mechanical contractors, roof contractors, fire sprinkler and fire alarm testing contractors, and elevator contractors. |                    |                     |                  |                   |
| 2  | <b>Construction Documents (Blueprints).</b> Provide all available construction documents for the original construction of the building or for any tenant improvement work or other recent construction work.   |                    |                     |                  |                   |
| 3  | <b>Site plan.</b> Provide a site plan, preferably 8 1/2" X 11", which depicts the arrangement of buildings, roads, parking stalls, and other site features.  |                    |                     |                  |                   |
| 4  | <b>Certificates of Occupancy</b> and original <b>Building Permits.</b>   |                    |                     |                  |                   |
| 5  | <b>Tenant List.</b> 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).   |                    |                     |                  |                   |
| 6  | <b>Apartment Unit Summary.</b> For apartment properties, provide a summary of the apartment unit types and quantities, including the floor area of each apartment unit as measured in square feet.   |                    |                     |                  |                   |
| 7  | <b>Hotel &amp; Nursing Home Room Summary.</b> For hotel or nursing home properties, provide a summary of the room types and room type quantities, including the floor area of each room type.  |                    |                     |                  |                   |
| 8  | <b>Occupancy Percentage.</b> Provide the current occupancy percentage and typical turnover rate records (for commercial and apartment properties).   |                    |                     |                  |                   |
| 9  | <b>Inspection Documents and Certificates.</b> Fire, building, and health department inspection reports and elevator inspection certificates.   |                    |                     |                  |                   |
| 10 | <b>Warranties.</b> Roof and HVAC warranties, or any other similar relevant documents.  |                    |                     |                  |                   |
| 11 | <b>Utility Companies.</b> The names of the local utility companies which serve the property, including the water, sewer, electric, gas, and phone companies.   |                    |                     |                  |                   |
| 12 | <b>Capital Improvement Summary.</b> A summary of recent (over the last 5 years) capital improvement work which describes the scope of the work and the cost of the improvements.   |                    |                     |                  |                   |
| 13 | <b>Proposed Improvements.</b> Pending contracts or proposals for future improvements.  |                    |                     |                  |                   |
| 14 | <b>Historical Costs.</b> Costs for repairs, improvements, and replacements.  |                    |                     |                  |                   |
| 15 | <b>Records.</b> Records of system & material ages (roof, MEP, paving, finishes, furnishings).  |                    |                     |                  |                   |
| 16 | <b>Brochures or Marketing Information.</b>   |                    |                     |                  |                   |
| 17 | <b>Appraisal,</b> either current or previously prepared.   |                    |                     |                  |                   |
| 18 | <b>Previous reports</b> pertaining to the physical condition of property.  |                    |                     |                  |                   |
| 19 | <b>ADA survey</b> and status of improvements implemented.  |                    |                     |                  |                   |
| 20 | <b>Litigation.</b> Current / pending litigation related to property condition.   |                    |                     |                  |                   |

WJDneil HVAC Contractor former  
 district employee Brad Schuster  
 District Terry Coklin

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"> <li>1. All available construction documents (blueprints) for the original construction of the building or for any tenant improvement work or other recent construction work.</li> <li>2. A site plan, preferably 8 1/2" X 11", which depicts the arrangement of buildings, roads, parking stalls, and other site features.</li> <li>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).</li> <li>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.</li> <li>5. For hotel or nursing home properties, provide a summary of the room types and room type quantities.</li> <li>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.</li> <li>7. The names of the local utility companies which serve the property, including the water, sewer, electric, gas, and phone companies.</li> </ol> | <ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>10. Records of system &amp; material ages (roof, MEP, paving, finishes, furnishings).</li> <li>11. Any brochures or marketing information.</li> <li>12. Appraisal, either current or previously prepared.</li> <li>13. Current occupancy percentage and typical turnover rate records (for commercial and apartment properties).</li> <li>14. Previous reports pertaining to the physical condition of property.</li> <li>15. ADA survey and status of improvements implemented.</li> <li>16. Current / pending litigation related to property condition.</li> </ol> |
|---|---|

Your timely compliance with this request is greatly appreciated.