MILWAUKEE COUNTY

Facilities Management Division

- Operations & Maintenance
- Architecture, Engineering & Environmental Services
- Facilities Planning
- Sustainability
- Security

MEMORANDUM

TO: Aaron Hertzberg, Director, Department of Administrative Services

FROM: Sean Hayes, Director, Department of Administrative Services – Facilities Management Division

DATE: January 26, 2026

RE: McGovern Senior Center Engineering Report, post August 2025 Flooding

Attached is the engineering report for the McGovern Senior Center following the flooding and subsequent mold event in August 2025. As previously noted, the 2025 flood followed multiple prior flooding events in recent years. The purpose of the report is to identify the sources of moisture intrusion and recommend corrective actions to reduce the risk of future flooding at McGovern.

Milwaukee County's Architecture, Engineering and Environmental Services team (AE&ES) does not recommend proceeding with a final comprehensive mold cleaning until the underlying moisture issues are corrected. Completing remediation without addressing the root causes creates a high likelihood of recurrence.

The report identifies multiple moisture pathways into the building, including deficiencies associated with the building's internal storm sewer system.

The report provides two repair options:

1. Minimal Repairs: $905,000
2. Comprehensive Repairs: $1,910,000 *(Recommended)*

AE&ES does not recommend the Minimal Repairs option, as it is unlikely to provide a durable, long-term solution. The appropriate path forward depends on the County's long-term intent for this facility. If Milwaukee County plans to continue occupying and operating the McGovern Senior Center, AE&ES recommends pursuing the Comprehensive Repairs option to address the underlying causes of moisture intrusion and reduce the risk of recurring mold and facility closures.

Operational impact: The building remains closed to the public until the repairs are completed and final mold remediation can be performed.

Funding: There is currently no budget identified for these repairs. If leadership directs AE&ES to proceed with repairs, we will need to seek emergency funding approval from the County Board to implement the repairs and complete final remediation.

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It should be noted that the recommended repairs should be considered, not just independently but in the context of Milwaukee County's 5-year capital budget plan. The 5-year capital budget calls for approximately $1,860,000* additional investment in the McGovern Senior Center by 2030. This estimate is down slightly from prior estimates as some planned work would be addressed by the Comprehensive Repairs suggested in the report.

Investing the $905,000-$1,910,000 outlined in the report would only be worthwhile if Milwaukee County is also committed to continued capital investment in the building over the next 5+ years. Any investments should then also be held to fully depreciate over the life of the investment as determined in partnership with the Office of the Comptroller.

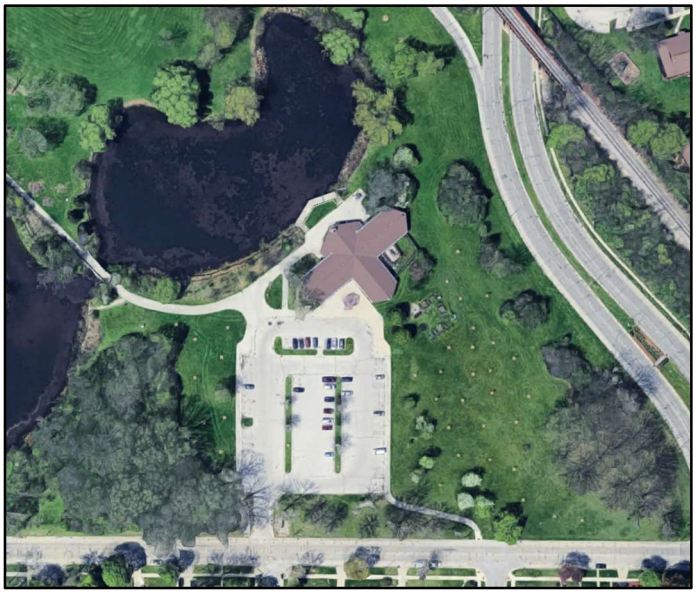
Sean Hayes

Director, Facilities Management Division

** the amount noted is not inflation adjusted and generally represents minimally expected repairs. It is not representative of all possible or recommended repairs.*

McGovern Senior Center
Moisture Investigation Report

4500 W Custer Avenue
Milwaukee, WI 53218



PREPARED FOR
Mr. Kevin O'Brien
Environmental Compliance Manager, CHMM
Milwaukee County Department of Administrative Services

PREPARED BY

Project Number – 24609

Site Observation Date: November 14 and 18, 2025
Report Date: January 22, 2026

Drew Falkenburg
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Paul Imig, PE
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Table of Contents

1. Introduction

1.1 Purpose

The purpose of the water/moisture investigation was to identify likely sources of water or excessive moisture and provide wholistic recommendations for corrective actions to prevent future water intrusion prior to additional remediation efforts. The Sigma Group, Inc. (Sigma) was authorized by the Milwaukee County Department of Administrative Services to provide civil engineering, moisture assessment, and facility assessment at the McGovern Senior Center located in McGovern Park at 4500 W Custer Avenue, Milwaukee, Wisconsin. This report summarizes our investigation/assessment, findings, and recommendations for prohibiting future mold growth.

1.2 Scope

Our scope of work was limited to a visual assessment of the site, building interior, exterior, and roof. A summary of events and available plans provided by the County were reviewed to understand the existing systems as they relate to the intended purpose of the project. Site visits were conducted on November 14 and 18, 2025. The building and site were observed with Darryl Whyte from facilities. Mr. Whyte answered questions and provided support during the site visits. The primary focus was on the basement mechanical space, crawl space, HVAC, and site. Secondary focus included all remaining interior spaces, building envelope, and roof system. Recommendations are provided as minimal recommendations and comprehensive recommendations. The objective of the minimal recommendations is to provide immediate solutions that may need further efforts at a future date. The objective of the comprehensive recommendations is to provide long term solutions that replace failing or faulty building systems. Costs for all recommendations are grouped per section. Estimated costs are Class 5 estimates as defined by the American Association of Cost Engineering International and are intended as concept or study level. Actual costs will vary and may alter based on the defined scope of work. No destructive testing or subsurface investigation was performed. Our recommendations should not be considered a guarantee or warranty of any kind. Not all improvements and sources of water intrusion will be identified. Our level of effort was relative to our associated fee.

2. Site Civil Engineering

Sigma reviewed design plans and records related to building and site construction that were provided by the County. We completed a visual evaluation of the site stormwater drainage patterns, asphalt and concrete condition, and general exterior conditions of the building and land immediately adjacent to it on November 14, 2025.

2.1 Site Drainage

McGovern Park Pond is located directly northwest of the senior center facility. The site topography reflects this with areas north and west of the building generally draining away from the facility and into the pond. The parking lot on the southwest side of the facility has a network of catch basins and storm pipes that collect stormwater. The northernmost catch basin has what appears to be the outlet pipe directed towards the pond that appears to be filled with concrete and may be impacting drainage discharge. There is shallow grass swale east of the building which receives drainage from the garden area and the area between the building and a ridge which divides the space between the building and N. Sherman Blvd. There are isolated pockets where the topography is relatively flat or even depressed, which has created some potential ponding in unpaved spots immediately adjacent to the building.

2.2 Asphalt and Concrete Condition

The parking lot to the southwest of the building is predominantly asphalt and is in fair condition. There is concrete curb separating the asphalt parking lot from the walkways that surround the building. There are two concrete sections of walkway near the facility – one section is near the entrance on the south side of the building and extends south to the parking lot, and another section is on the north side of the facility and jutting out into the pond. Both concrete portions appear to be in good condition. The remaining walkways on the north and west sides of the facility are asphalt and are generally in poor condition with evidence of settling and ponding water. Stormwater does not appear to drain well in the asphalt portions and appears to drain back toward the building in isolated locations.

2.3 Other Site Conditions

A portion of the roof is drained with gutters. These are collected via downspouts which then combine inside the footprint of the building. The internally collected drainage discharges west towards the pond, but we were not able to visually locate the discharge within the pond. Along the concrete retaining wall behind the lower concrete walkway by the pond there are several 3" pipes that outlet from the wall. These pipes are likely to provide drainage relief for water collected behind the retaining wall. The areas adjacent to the building where there are no gutters have frequent instances of depressed soil and pavement with evidence of ponding where stormwater comes off the roof. Adjacent to the two large windows on the northernmost part of the building are grates that cover pits which are approximately 4 feet deep. These do not appear to be connected to any stormwater systems but do offer a potential inlet for stormwater to get trapped under the building.

3. Moisture Assessment

Sigma completed limited visual observations and moisture assessment using instruments (thermal imaging camera and pinless moisture meter) on November 18, 2025.

3.1 Moisture Impact

Moisture-impacted building materials have the potential to create conditions conducive to mold/fungal growth. Molds are simple, microscopic organisms, present virtually everywhere, both indoors and outdoors. For molds to grow and reproduce, they need moisture and a food source. A food source can consist of organic material including leaves, plant material, paper, or dirt. Building materials including wood and wood products, drywall, drywall paper-backing, cellulose ceiling tile, and insulation are also common food sources for mold. Mold growth on surfaces can often be seen in the form of discoloration, frequently appearing as green, gray, brown, black, white, and other colors. Molds release countless tiny lightweight spores which travel through the air. Additionally, mold produces metabolic byproducts including microbial volatile organic compounds and mycotoxins which have been implicated in indoor air quality concerns. Inhalation is the primary exposure route of mold, mold spores, and mold metabolic byproducts. Accordingly, mold is one element of a building's indoor air quality condition.

According to the U.S. Environmental Protection Agency (USEPA) "Mold Remediation in Schools and Commercial Buildings", responses to water damage within the first 24 to 48 hours will reduce the likelihood of mold growth. Materials left in place which take longer to dry can create conditions conducive to fungal growth and can lead to future indoor air quality problems. Currently, there are no USEPA regulations or standards for airborne mold contaminants. Additionally, the Occupational Safety and Health Administration (OSHA) and the National Institute

for Occupational Safety and Health (NIOSH) have not established standards or threshold values for airborne exposure to mold or mold spores.

The County shared information with Sigma regarding the prior airborne and surface mold sampling. The spore concentration levels were determined to be of concern, and the building was closed to the public. Subsequent cleaning and mold resampling activities have occurred.

3.2 Visual Observations

Sigma toured the facility, including the first floor area, basement, and crawl space located on the east side of the basement. Sigma noted typical indoor air temperature and humidity levels during the site assessment. The building HVAC system was operational, and air was circulating within the building. We observed nine portable HEPA air filters in use (a tenth unit was present but was not in operation). No apparent concentrated or widespread mold growth was observed within the reviewed areas of the building. No wet drywall or wall surfaces were observed. One small area on the concrete basement floor (approximately one square foot) was noted to be wet but no other wet flooring was observed. An assessment of the crawl space noted a visibly dry floor consisting of small-diameter traffic bond or crushed concrete.

No mold sampling or laboratory analysis was performed as part of this investigation.

3.3 Moisture Assessment Methodology

Sigma utilized a FLIR model E8 Pro (serial number 13307698) infrared thermal imaging camera to identify materials potentially impacted by water or moisture. A Tramex Moisture Encounter Plus (TMEP) ME5 (serial number 240118048) pinless moisture meter was used to assess potential areas of moisture in building materials.

The infrared camera is a non-contact form of measurement which converts infrared energy into electronic signals that result in a thermal image. Temperature differences identified in the thermal images are evaluated to find 'colder' areas where potential moisture is present.

The TMEP detects moisture in various building materials including drywall. Sigma used the "drywall" scale on the moisture meter to assess the relative moisture content of the drywall in locations within the building. The TMEP alarms when greater than 60% relative moisture is detected. High relative moisture content can create conditions conducive to mold growth.

Sigma selected and evaluated interior wall surfaces including drywall, wood composite, and wooden boards. If the infrared camera had identified potential areas of elevated moisture, a subsequent assessment with the Tramex moisture meter would have been performed.

There were no apparent locations of elevated moisture identified by the infrared camera, therefore, assessing materials with the moisture meter would not typically be performed. However, we reassessed several locations with the moisture meter to confirm the lack of moisture indicated on the infrared imagery. The assessment did not indicate any locations with elevated moisture conditions.

4. Facility Assessment

Sigma reviewed client-provided plans and the reported sequence of events prior to the site visit. A visual observation was conducted of all interior spaces, HVAC, roof, and exterior façade. Focus was given to

historically reported issue areas including the HVAC, exterior wall penetrations, and basement crawl space.

4.1 Gravel Crawl Space

A crawl space is present under the predominant area of the building footprint. The crawl space utilizes a gravel floor over a vapor barrier with drain tile around the perimeter connecting into sump pits. HVAC ducts and storm sewer pipes run throughout the area. Storm pipes collect water from the gutters and downspouts and discharge through centralized storm pipes to the storm pond.

One of centralized storm pipes was sheered, discharging onto the gravel floor. Sump pump discharge pipes were observed to be disconnected and the operational status of the pumps was questionable. Pipe insulation was observed to be severely deteriorated from sustained high moisture content.

4.2 Foundation Wall Penetrations

A full height basement is provided in a small section of the building footprint. This area houses main electrical panels, boilers, pumps, a water heater, and an air handler. Multiple foundation wall penetrations are present for electrical conduits and exhaust vents. The air handler utilizes a plenum space where sheet metal and air filters sit directly on the ground. A floor drain and sump pit were present and appear to be functional. Details for the conditions of the exterior pavement and grade are provided in the Civil Engineering section.

The exterior grade adjacent to the foundation wall has settled and does not slope away from the building. Electrical and exhaust wall penetrations are not sealed and show signs of water intrusion. Corrosion staining is present at and on conduit and junction boxes and exhaust ductwork for the boilers and water heater. The air handler showed heavy corrosion along the floor level.

4.2 Building Envelope

Minimal signs of interior water intrusion were observed. Water staining on the fireplace was present coming through the flashing at the ceiling. Failed ceiling tiles in the theater room corresponded to missing, damaged, or recently repaired shingles. Gutters and downspout inlets were clogged with debris. Chimney caps were missing over several chimney flues. Multiple angled sections of the roof shed water directly onto the ground without the presence of a gutter and downspout system. Sealant and mortar were failing in numerous areas. Paint and façade showed signs of water damage.

5. Recommendations-Minimal

The following are nominal recommendations to minimally address the items we noted during the site visits. The objective of these recommendations is to provide immediate solutions that may need further efforts at a future date. The total estimated cost of the three minimal recommendations identified below is **$905,000.**

5.1 Site Work - $165,000

- Video inspection of internal drain tile and roof drainpipe to pond to determine pipe routing, condition, and discharge location of the stormwater system. The northernmost parking lot catch basin apparent discharge pipe appears to be filled with concrete and should be inspected to verify drainage. Install backflow prevention for all pipes leading into the storm pond.

- Asphalt pavement adjacent to the building was observed to have settled. This settlement has resulted in water getting trapped next to the building. This can result in water entering the building through the north foundation wall. Replace all asphalt walkways north of the building and provide positive drainage away from the building toward the pond.
- The shallow grass swale east of the building does not sufficiently capture stormwater and direct it around the building. The swale should be regraded, deepened, and extended southwesterly to capture and divert stormwater.

- Ensure positive drainage away from building walls and provide maintenance strip adjacent to building in greenspace to reduce potential for erosion caused by roof drainage not collected in gutters.

5.2 Moisture Abatement - $260,000

- If materials are removed and wall spaces are subsequently opened, a visual assessment should be performed to determine whether additional materials should be evaluated for mold and/or should be removed.

- Perform fungal abatement/deep cleaning activities including the following:
  - Establish a critical barrier, negative pressure containment of the building by setting poly critical barriers from the deck to the floor, and set up a Poly "Z-Flap" air lock at the doorway. Establish HEPA filtered negative pressure & exhaust outside of building. Install a "HEPA vent" at the decontamination suite to filter incoming air.
  - Construct a three-chamber decontamination suite for use by abatement workers.
  - Remove and dispose of any accessible porous building materials (ceiling tiles, carpet, drywall, and fiberglass insulation present on pipes within the first floor.
  - Clean (with a hydrogen peroxide-based solution or similar) all non-porous horizontal surface within the first floor.
  - Dispose of materials including upholstered furniture, books, and pamphlets.
  - Clean the entire floor surface with a biocide solution to impeded possible future mold growth.
  - Perform final cleaning activities with HEPA vacuum and damp wiping with an antifungal disinfectant.
  - Apply a clear biocide solution to all surfaces to help impede possible future mold growth.

- Consider conducting indoor and comparative outdoor airborne mold sampling as a building clearance activity prior to reopening the building to the public.

5.3 Facility Work - $480,000

- Replace all damaged or broken sections of pipe and fittings connecting the gutter downspouts to the outfall into the storm pond. The status of backflow prevention could not be determined. Add backflow prevention if not currently existing. Provide appropriate pipe support to prevent future damage.

- Connect all sump pumps to discharge pipes and verify that sump pumps are in good working order. Install backflow prevention to discharge pipes where missing. Video scope drain tiles to ensure all are in good working order and are not crushed or blocked.

- Seal all exterior wall penetrations with backer rod and an exterior rated sealant in conjunction with adjusting the pavement surfaces to provide adequate drainage from the face of the building away for a minimum of 5 feet.

- Repair air handler ductwork sheet metal in conjunction with moisture mitigation efforts to isolate HVAC supply air and filters from the adjacent mechanical room space.

- The majority of the roof asphalt shingles were nearing the end of their typical useful life. Replace missing or damaged shingles until a full roof replacement is performed. Add a rejecting trim piece with drip edge under the outer edge of shingles at sections of the roof where no gutter is present. Regularly clean gutters to prevent debris from clogging downspout inlets. Tuckpoint all cracking mortar. Remove and replace all failing sealant. Add chimney caps to the flues where missing.

- Remove peeling paint and repair the façade as necessary where damaged. Prime and paint to match existing.

6. Recommendations-Comprehensive

The following are comprehensive recommendations to fully address the items we noted during the site visits. The objective of these recommendations is to provide long-term solutions that replace failing or faulty building systems. The total estimated cost of the three comprehensive recommendations identified below is **$1,910,000.**

6.1 Site Work - $630,000

- Survey and design a grading plan to replace all pavement, restore and stabilize soil where new storm sewer is installed to provide adequate drainage away from the building. Provide backflow preventer and/or overflow release on storm pipe between discharge and building to avoid water back-up within storm pipe to building.

- Video inspection of internal drain tile to determine pipe routing, condition, and discharge location.

- The northernmost parking lot catch basin apparent discharge pipe appears to be filled with concrete and should be inspected to verify drainage. Install backflow prevention for all pipes leading into the storm pond.

- Asphalt pavement adjacent to the building was observed to have settled. This settlement has resulted in water getting trapped next to the building. This can result in water entering the building through the north foundation wall. Survey and design a pavement plan to replace all asphalt walkways north of the building and provide positive drainage away from the building toward the pond.

- The shallow grass swale east of the building does not sufficiently capture stormwater and direct it around the building. The swale should be regraded, deepened, and extended southwesterly to capture and divert stormwater.

- Ensure positive drainage away from building walls and provide maintenance strip adjacent to building in greenspace to reduce potential for erosion caused by roof drainage not collected in gutters.

6.2 Moisture Abatement - $260,000

- If materials are removed and wall spaces are subsequently opened, a visual assessment should be performed to determine whether additional materials should be evaluated for mold and/or should be removed.

- Perform fungal abatement/deep cleaning activities including the following:
  - Establish a critical barrier, negative pressure containment of the building by setting poly critical barriers from the deck to the floor, and set up a Poly "Z-Flap" air lock at the doorway. Establish HEPA filtered negative pressure & exhaust outside of building. Install a "HEPA vent" at the decontamination suite to filter incoming air.
  - Construct a three-chamber decontamination suite for use by abatement workers.
  - Remove and dispose of any accessible porous building materials (ceiling tiles, carpet, drywall, and fiberglass insulation present on pipes within the first floor.
  - Clean (with a hydrogen peroxide-based solution or similar) all non-porous horizontal surface within the first floor.
  - Dispose of materials including upholstered furniture, books, and pamphlets.
  - Clean the entire floor surface with a biocide solution to impeded possible future mold growth.
  - Perform final cleaning activities with HEPA vacuum and damp wiping with an antifungal disinfectant.
  - Apply a clear biocide solution to all surfaces to help impede possible future mold growth.

- Consider conducting indoor and comparative outdoor airborne mold sampling as a building clearance activity prior to reopening the building to the public.

6.3 Facility Work - $1,020,000

- Disconnect and abandon the exiting downspout connection and drainage system under the building. Seal/cap all interior storm sewer piping. Seal exterior wall penetrations. Install new exterior underground storm sewer piping collecting all roof downspouts external to building, install backflow prevention, and drain to pond in conjunction with the grading and pavement projects.

- Abandon the exiting drain tile system. Design a new system to effectively remove water surrounding the building foundation. Excavate and replace all interior and exterior drain tile, sump pits, and sump pumps. Install backflow prevention to discharge pipes.

- Replace all through wall electrical runs below grade and any corroded electrical components. Seal all exterior wall penetrations with backer rod and an exterior rated sealant in conjunction with adjusting the pavement surfaces to provide adequate drainage from the face of the building away for a minimum of 5 feet.

- Repair air handler ductwork sheet metal in conjunction with moisture mitigation efforts to isolate HVAC supply air and filters from the adjacent mechanical room space.

- The majority of the roof asphalt shingles were nearing the end of their typical useful life. Perform a full roof replacement. Add a rejecting trim piece with drip edge under the outer edge of shingles at sections of the roof where no gutter is present. Regularly clean gutters to prevent debris from clogging downspout inlets. Tuckpoint all cracking mortar. Remove and replace all sealant. Add chimney caps to the flues where missing.

- Remove peeling paint and repair the façade as necessary where damaged. Prime and paint to match existing.

SITE EVALUATION PHOTOS

Photo 1: Unpaved area adjacent to west side of building.

Photo 2: Unpaved area adjacent to door on west side of building.

Photo 3: Unpaved area adjacent to north side of building.

Photo 4: Unpaved area adjacent to north side of building.

McGovern Senior Center **January 22, 2026**

Milwaukee, WI **Sigma Project Number: #24609**

SITE EVALUATION PHOTOS

Photo 5: Unpaved area adjacent to north side of building.

Photo 6: Unpaved area adjacent to northeast side of building.

Photo 7: Existing shallow swale looking north.

Photo 8: Existing shallow swale looking south-east.

SITE EVALUATION PHOTOS

Photo 9: Area between southeast side of building and garden identified for potential shallow swale addition.

Photo 10: Inlet in parking lot with concrete filled pipe connection.

Photo 11: Inlet in parking lot south of inlet from Photo 10.

Photo 12: Exterior of inlet from Photo 10.

SITE EVALUATION PHOTOS

Photo 13: Deteriorating and settling asphalt on north side of building.

Photo 14: Cracked and settling asphalt on north side of building.

Photo 15: Settling asphalt near entrance on northwest side of building.

Photo 16: Deteriorating and settling asphalt on northwest side of building.

FACILITY EVALUATION PHOTOS

Photo 1: Damaged Storm Pipe

Photo 2: Broken Sprinkler Pipe

FACILITY EVALUATION PHOTOS

Photo 3: Disconnected Sump Pump

Photo 4: Sump Pit

FACILITY EVALUATION PHOTOS

Photo 5: Foundation Wall Penetration Leaks

Photo 6: Boiler Exhaust Leak

Photo 7: HVAC Corrosion

Photo 8: HVAC Corrosion

Photo 9: Roof Aging

Photo 10: Roof Damage

Photo 11: Blocked Gutter Inlet

Photo 12: Missing Flue Cap

Photo 13: Needed Trim Where There is No Gutter

Photo 14: Façade Damage

FACILITY EVALUATION PHOTOS

Photo 15: Failing Sealant

Photo 16: Cracking Mortar