DMPS FACILITY ASSESSMENT | MORRIS ELEMENTARY

11.07.2023

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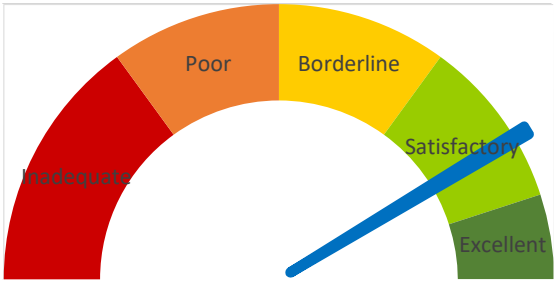


REPORT ORGANIZATION

EXECUTIVE BUILDING SUMMARY

Morris Elementary's on-site facility conditions assessment was conducted on November 7, 2023 and included visual conditions assessment from professionals covering interior architecture, exterior building envelope, the property's grounds (site), structural condition, mechanical (HVAC/Plumbing) systems, electrical systems (power, exterior lighting, interior lighting, fire alarm, and general IT), and the elevator conditions.

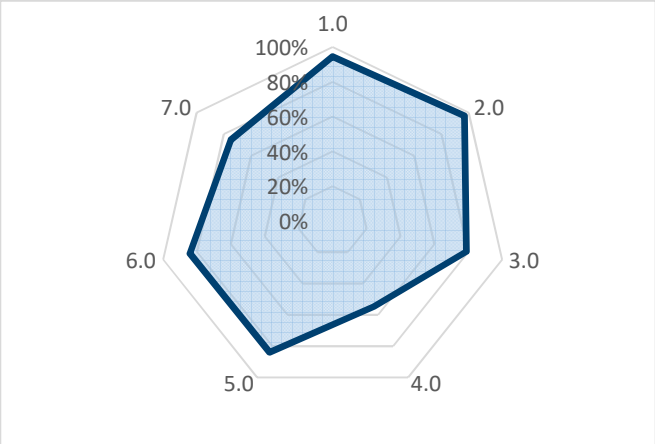
A number of maintenance items requiring attention were noted during the assessment including adjustment of hardware on interior and exterior doors, evidence of a potential roof leak, routine cleaning of roof drains, and required grounding of equipment in the MDF room. Morris Elementary's building envelope and school site are in need repairs and improvements in the near future. This is reflected in the 1-2 year projects proposed in this report, which include:

- Protecting interior wood doors
- Replacing exterior sealant joints
- Masonry repointing
- Exterior repainting
- Replacing asphalt and concrete pavement
- Replacing concrete door stoops
- Repairing and protecting window lintels
- Installing a redundant water heater
- Modifying ductwork to meet mechanical code requirements
- Upgrading electrical power distribution

These projects along with all of the recommended potential projects at the 3-4 year and 5-10 year priority levels are further described within this report.

Discipline Comparison				Building Health				
Assessment Category Summary		Max Pnts	Earned Pnts	Bldg Weight Factor	Max Pnts	Earned Pnts	%	Rating
1.0	Educational Adequacy	165	156	2.00	330	312	95%	Excellent
2.0	Environment for Education	325	315	0.60	195	189	97%	Excellent
3.0	Exterior Envelope	95	75	3.00	285	225	79%	Satisfactory
4.0	School Site	95	52	1.50	143	78	55%	Borderline
5.0	Structural Conditions	105	88	1.30	137	114	84%	Satisfactory
6.0	Mechanical Systems	660	556	0.80	528	445	84%	Satisfactory
7.0	Electrical Systems	455	341	0.75	341	256	75%	Satisfactory
Total					**1,958**	**1,619**	**83%**	**Satisfactory**

Morris Elementary
Discipline Comparison



Rating Table				
1-29%	30-49%	50-69%	70-89%	90-100%
Inadequate	Poor	Borderline	Satisfactory	Excellent

After totaling the scores from the various discipline assessment reports Morris Elementary scored a building health rating of 83%, or "Satisfactory" per the scale described above. Per the graph shown on the cover page of this report, scores within the "green" range are considered positive scores. Improvements to Morris Elementary's building envelope, school site, and electrical systems will have the greatest impact toward increasing this building's overall rating.

Building Data Record

Building Name: **Morris Elementary**

Date: **November 7, 2023**

Address: **1401 Geil Avenue**
Des Moines, IA 50315

High School Feeder System: **Lincoln High School**

Building SF: **71,114 square feet**

Site Acreage: **6.09 acres**

Date(s) of Construction: **1954, 2001, 2016**

Date(s) of Roof Replacement: **2000**

Current/Scheduled Projects: **No projects ongoing or scheduled.**

Existing Building Data:

- [x] Egress Plans
- [ ] Original Docs
- [x] Major Renovations and Additions
- [ ] Minor Projects
- [ ] Maint. Reports

Site Items:

- [ ] Student Garden
- [ ] Loading Dock
- [x] Stormwater Detention

Energy Source:

- [x] Electric
- [ ] Gas
- [x] Geothermal
- [ ] Solar

Cooling:

- [ ] DX RTU or DOAS
- [ ] Chiller
- [ ] VRF
- [x] Water Source Heat Pump
- [ ] Fluid Cooler

Heating:

- [ ] Gas/Electric RTU or DOAS
- [x] Boiler
- [ ] Water-to-Water Heat Pump
- [ ] VRF
- [x] Water Source Heat Pump

Structure Fireproofing:

- [x] No
- [ ] Yes

Construction:

- [x] Load Bearing Masonry
- [x] Steel Frame
- [x] Concrete
- [ ] Wood
- [ ] Other

Exterior Facade:

- [x] Brick
- [x] Stucco
- [ ] Metal
- [ ] Wood
- [x] Other **Precast Concrete**

Floor/Roof Structure:

- [ ] Wood Joists
- [ ] Steel Joists/Beams
- [x] Slab on Grade
- [ ] Struct. Slab
- [ ] Other

A | Architectural, Programming

ASSESSOR: Tim Bungert

1.0 Educational Adequacy

		Weight Factor	Rating	Points	Comments
General					
1.1	**Floor materials** are appropriate for space type.	2	5	10	
Elective/Secondary Classroom					
1.2	**Gymnasium** is adequate for providing physical education programming.	2	3	6	Gymnasium has a very long sound reverberation time and would benefit from additional acoustical absorption.
1.3	**Cafeteria** has adequate space, furniture, and acoustics for efficient lunch use.	2	5	10	
1.4	**Music room** is adequate for providing introductory music instruction.	2	4	8	Music room would benefit from more acoustic absorption to reduce sound reverberation time.
1.5	**Art room** has sufficient accommodations for program.	2	5	10	
1.6	**Library/Resource/Media Center** provides appropriate and attractive space.	1	5	5	
Core Classroom					
1.7	Classroom space permits arrangements for **small group activity.**	3	5	15	
1.8	**Student storage space** is adequate.	2	5	10	
1.9	**Teacher storage space** is adequate.	3	4	12	Storage is adequate in most classrooms. A few classrooms on the east corridor (notably 121, 122, and 125) appear to need more teacher storage space.
1.10	Classroom **acoustical treatment** of ceiling, walls, and floors provide effective sound control.	3	5	15	

A | Architectural, Programming

ASSESSOR: Tim Bungert

		Weight Factor	Rating	Points	Comments
1.11	**Classroom power and data receptacles** are located to support current classroom instruction.	4	5	20	
1.12	Educational **technology** supports instruction.	4	5	20	
Administration					
1.13	**Conference/Private meeting rooms** are adequate for large and small meetings.	1	5	5	
1.14	**Main office** has a check-in and waiting area.	2	5	10	
	TOTAL			156	

A | Architectural, Interior

ASSESSOR: Tim Bungert

2.0 Environment for Education

Design

		Weight Factor	Rating	Points	Comments
2.1	**Traffic flow** is aided by appropriate foyers and corridors.	1	5	5	
2.2	Communication among students is enhanced by **common areas.**	1	5	5	
2.3	Areas for students to **interact are suitable to the age group.**	1	5	5	
2.4	Large group areas are designed for effective **management of students.**	2	5	10	
2.5	**Furniture Systems** are in good or like new condition.	1	5	5	
2.6	**Color schemes**, building materials, and decor are **engaging and unify** the school character.	2	5	10	
2.7	Windows and skylights provide access to **adequately controlled daylight** for regularly occupied spaces.	3	5	15	
2.8	Windows provide access to **quality views** (to exterior, courtyards, artwork etc.) for regularly occupied spaces.	3	5	15	
2.9	**Lighting has proper controls** to provide the required light levels for various teaching and learning needs.	2	5	10	
2.10	**Staff dedicated spaces** include conference space, work space, and dedicated restrooms.	1	5	5	

A | Architectural, Interior

ASSESSOR: Tim Bungert

		Weight Factor	Rating	Points	Comments
2.11	**Main office** is visually connected to the entry and is welcoming to students, staff, and guests.	2	5	10	
2.12	**Break room** is adequately sized and furnished for proper use.	1	5	5	
2.13	**Mother's room** is a separate designated space properly furnished.	1	0	0	No mother's room provided.
Maintainability					
2.14	**Floor surfaces** are durable and in good condition.	1	4	4	Walk off mats at nearly all entrances are damaged and in need of replacement. VCT flooring in corridors outside of rooms 116, 125, 127, and 148 is cracked and/or heavily worn. VCT near exterior doors in the gymnasium (room 167) shows significant discoloration from prolonged exposure to sunlight.
2.15	**Ceilings** throughout the building – including services areas – are easily cleaned and resistant to stain.	1	5	5	
2.16	**Walls** throughout the building – including services areas – are easily cleaned and resistant to stain.	1	5	5	
2.17	**Built-in casework** is designed and constructed for ease of maintenance.	1	4	4	Previously-painted wood veneer casework throughout the building has cosmetic damage on base cabinet doors.
2.18	**Doors** are either solid core wood or hollow metal with a hollow metal frame and well maintained.	3	4	12	Nearly all wood doors and adjacent wood trim show signs of finish damage from wet mopping the adjacent corridor flooring.
2.19	**Facility doors** are keyed to standardized master keying system.	3	5	15	
2.20	**Restroom partitions** are securely mounted and of durable finish.	2	5	10	

A | Architectural, Interior

ASSESSOR: Tim Bungert

		Weight Factor	Rating	Points	Comments
2.21	**Adequate electrical outlets** are located to permit routine cleaning in corridors and large spaces.	1	5	5	
Occupant Safety					
2.22	Classroom doors are **recessed and open outward.**	4	5	20	
2.23	Door hardware (into classrooms or any occupied rooms off of corridors) include **intruder classroom locksets.**	3	5	15	
2.24	**Door panels** into classrooms and other occupied spaces contain **vision lite.**	3	5	15	
2.25	**Vision lite** in doors is clear and uncovered.	2	5	10	
2.26	**Glass** is properly located and protected to prevent accidental injury.	2	5	10	
2.27	**Flooring** is maintained in a **non-slip** condition	2	5	10	
2.28	**Traffic areas terminate at exit or** stairway leading to egress	5	5	25	
2.29	Multi-story buildings have at least **two stairways** from all upper levels for student egress.	5	N/A	0	
2.30	**Stairs (interior and exterior)** are well maintained and in good condition meeting current safety requirements.	5	N/A	0	

A | Architectural, Interior

ASSESSOR: Tim Bungert

		Weight Factor	Rating	Points	Comments
2.31	At least **two independent exits** from any point in the building	5	5	25	
2.32	**Emergency lighting** is provided throughout the building.	5	5	25	
	TOTAL			315	

A | Architectural , Exterior

ASSESSOR: Matthew Gaul

3.0 Exterior Envelope

		Weight Factor	Rating	Points	Comments
Design					
3.1	Overall **design is aesthetically pleasing** and appropriate for the age of students.	2	3	6	Building requires extensive masonry cleaning, especially around north west wing.
Maintainability					
3.2	**Roofs** appear sound, have positive drainage, and are water tight.	3	3	9	Two missing drain caps. Six areas of noticeable ponding. Three areas of severe ponding with debris. Roof replacement in 5-10 years.
3.3	**Roof access** is safe for all roofs.	3	3	9	Roof areas D and M lack sufficient safe access.
3.4	Exterior **window sealant** is fully intact without cracks or gaps.	3	5	15	
3.5	**Glazing** is low-e coated, insulated, and overall in good condition.	1	5	5	Low-e coating cannot be determined.
3.6	**Operable windows** are functional and safe. Operable portion of window fully seals when closed without gapping or leaking.	2	5	10	
3.7	**Exterior doors** are of durable material requiring minimum maintenance.	2	5	10	
3.8	**Exterior walls** are of material and finish requiring little maintenance,	1	3	3	Exterior materials and finishes are low maintenance, but they have not been maintained. In various locations: brick requires cleaning, grout requires replacement, and paint over metal requires repainting.
3.9	**Exterior Doors** open outward and are equipped with **panic hardware.**	1	5	5	
3.10	**Exterior Doors are monitored** or controlled by an access control system.	1	3	3	01 - Doors do not latch 07 - Doors with card readers 08 - Doors with locks or no exterior lock 15 - Doors with no signage. 00 - Doors at courtyard with no monitoring.
	TOTAL			75	

C | Civil

ASSESSOR: Jack Gorman

4.0 Morris Elementary

		Weight Factor	Rating	Points	Comments
4.1	**Site topography** and grading drains water away from the building and retaining walls.	1	5	5	Site had positive drainage away from the building, the site was fairly flat and no issues were observed.
4.2	**Parking areas** are in good condition.	5	2	10	The south parking lot is concrete and in good condition. The north lot is primarily asphalt and is cracking throughout.
4.3	**Drive areas** are in good condition.	3	1	3	The south lot drive areas are in good condition. The north lot, from the east entrance to the concrete parking addition, had substantial cracking and some potholes in the drive areas.
4.4	**Sufficient on-site, solid surface parking** is provided for faculty, staff, and community.	1	4	4	There were a few spaces available in the south parking lot and multiple free spaces in the west addition to the north lot.
4.5	**Sidewalks** around the facility are in good **condition.**	1	2	2	Tripping hazards were observed in the east sidewalk and along the drop off area on the north side of the school. The sidewalk to the west along 16th St had shifted and created a tripping hazard near the tree there. A portion of the south walk was cracking but not profusely.
4.6	**Sidewalks are located** in appropriate areas with adequate building access.	1	5	5	All doors had sidewalk access, maneuvering the site was done without any difficulty.
4.7	**Hard surface** playground surfaces are in good condition.	3	4	12	There were some cracks in the asphalt ~4" wide and to the full depth of the asphalt. A couple of sag locations were also observed but the remaining playground surface was in good condition besides a small area by the building.
4.8	**Fencing** around the site is in good condition.	1	2	2	The west side fence was old and overgrown with trees, and some of the fence posts were observed to have trees growing around them.
4.9	**Trash enclosure** is in good condition.	1	N/A	0	Dumpsters were observed in the north drive without any enclosure around them.
4.10	**Utilities** are in newly constructed conditions and placed in suitable locations.	1	4	4	The detention basin outlet concrete rim was cracked, all other utilities on site were in good condition.

		Weight Factor	Rating	Points	Comments
4.11	**Site has sufficient room** for both building and parking expansion.	1	3	3	There is some space available to the NE or SW of the site but there's not much space to work with.
4.12	Site has **onsite bus and parent pickup** up with adequate length, good separation and general good site circulation.	1	2	2	Parent pickup/drop off is on the north and south side of the site, with the bus lane on the east side. On the south side, parents backup into the 4 way stop on Geil & 14th St. and the area is very congested for a short time.
	TOTAL		52		

S | Structural

ASSESSOR: Erik Raker

5.0 Structural Conditions

		Weight Factor	Rating	Points	Comments
Foundations					
5.1	**Foundations** appear to be in good condition with no visible cracks.	1	5	5	
5.2	There does not appear to be any **foundation settlement.**	2	5	10	
5.3	**Basement walls** do not appear to have any cracks.	1	N/A	0	No basement walls.
5.4	**Stoops** appear to be in good condition.	1	3	3	Stoop at SE entrance between rooms 115 and 116 includes a ramp and hand rail. Stoop has a significant crack at the exterior wall. Railing bases are rusting. Stoop is serviceable now but should be monitored. Railing needs to be repainted at a minimum. Recommend replacing the railing.
Slab on Grade					
5.5	**Slabs on grade** do not appear to have any cracks	1	5	5	
5.6	Slabs on grade do not appear to have any **settlement.**	1	5	5	
Exterior Walls					
5.7	**Brick masonry** appears to be in good condition.	2	3	6	Water stains on exterior brick wall in numerous locations. It appears that water from the roof is overflowing the parapet. West wall near rooms 155 and 156 need tuck pointing. Expansion joint caulk has failed. Mortar has failed in some locations on this wall as well.
5.8	**Lintels** appear in good condition (no visible deflection or rust).	1	3	3	Lintels on the south wall from SW corner of room 175 to SE corner of room 117 are showing signs of rust. Lintels are not failing but are showing early indications of rust. Suggest sand blasting and repainting these lintels to add years to their service life.
5.9	**CMU** is in good condition.	1	5	5	
5.10	**Precast** is in good condition.	1	5	5	

S | Structural

ASSESSOR: Erik Raker

		Weight Factor	Rating	Points	Comments
Interior Walls					
5.11	**Interior walls** appear to be in good condition.	1	5	5	
Floor Framing (Elevated)					
5.12	**Floor framing** appears to be in good condition.	3	N/A	0	
5.13	Floor framing appears to meet the **code requirements.**	3	N/A	0	
Roof Framing					
5.14	**Roof framing** appears to be in good condition.	3	5	15	
Miscellaneous					
5.15	**Retaining walls** appear to be in good condition.	1	N/A	0	
5.16	**Canopies** appear to be in good condition.	1	3	3	Canopies at front entry and NE corner by rooms 127 and 129 are showing signs of distress. Front canopy EIFS needs repair. NE canopy columns and stoop need paint and repair soon or risk further expensive deterioration.
5.17	**Loading dock concrete** appears to be in good condition.	2	4	8	Loading dock concrete is still serviceable, but showing signs of aggressive use. Continue to monitor the condition of the loading dock.
5.18	**Mechanical screening** appears to be in good condition.	2	5	10	
5.19	**Stairs** appear to be in good condition.	1	N/A	0	
5.20	**Stair railings** appear to be in good condition.	1	N/A	0	

S | Structural

ASSESSOR: Erik Raker

		Weight Factor	Rating	Points	Comments
5.21	**Tunnels** appear to be in good condition without cracks.	1	N/A	0	
5.22	There is a **designated hardened area** in the building.	1	0	0	No hardened area observed.
5.23	The hardened area appears consistent with the **ICC 2018 code.**	1	N/A	0	
	TOTAL		88		

MP | Mechanical & Plumbing

ASSESSOR: Chuck Heldenbrand

6.0 Mechanical Systems

HVAC Design

		Weight Factor	Rating	Points	Comments
6.1	**Zone Control.** Thermostats are provided in each space for individual zone control of space temperatures.	3	5	15	
6.2	**Thermostat location.** Thermostats are properly located in the space.	3	5	15	
6.3	Appropriate **amount of ventilation** are provided to each space.	5	5	25	New DOAS system appears to be providing 0.25 CFM/sqft and averaging 400 cfm/classroom.
6.4	**Ventilation** is provided during occupied hours.	5	5	25	DOAS units operational and new
6.5	**Outdoor air intake locations** are appropriate.	4	4	16	DOAS unit are roof mounted with both OA and EA on same equipment
6.6	Appropriate **levels of exhaust** are provided for areas requiring this such as restrooms, janitor's closets and locker rooms.	5	5	25	
6.7	**Building pressurization.** The design takes into account the balance between ventilation and exhaust air	2	5	10	
6.8	**Major HVAC Equipment** appears to be within it's acceptable **service life.**	5	5	25	New Heatpumps in classrooms and new DOAS on roof in place of ERVs
6.9	**Cooling loads** are within equipment operational capacity.	5	5	25	No summer loop issues and cooling is sufficient.
6.10	**Heating loads** are within equipment operations capacity.	5	4	20	Electric backup boiler is limited at 82 KW. Well field loop is sufficient and using gas for gym.

MP | Mechanical & Plumbing

ASSESSOR: Chuck Heldenbrand

		Weight Factor	Rating	Points	Comments
6.11	**Dehumidification** is provided and addressed humidity loads in incoming outside air.	3	5	15	New DOAS has hot gas reheat for improved dehumidification to building.
Plumbing Design					
6.12	**Water Supply Pressure** is adequate to allow for operation of plumbing fixtures.	5	5	25	
6.13	Appropriate **backflow preventer** is provided at connection to city water supply.	5	5	25	Dual RPZ
6.14	**Domestic hot-water systems** are within equipment operational capacity.	5	5	25	New gas water heater high efficiency
6.15	Domestic **hot-water recirculating systems** allow for hot-water at fixtures within a reasonable amount of time.	3	3	9	Recirc system in place but may need rebalanced for proper flow.
6.16	**Sanitary sewer systems** are sized and sloped to allow for proper drainage.	5	5	25	
6.17	Appropriately sized **grease interceptors** are provided for facilities with food service.	3	0	0	No exterior tank type grease interceptor shown on plans.
6.18	**Roof drainage** systems are sized appropriately and overflow drainage systems are installed.	5	5	25	Overflow roof drains installed
6.19	**Restroom fixtures** comply with DMPS preferences.	3	5	15	Auto-flush and hands free fixtures in restrooms
Maintainability					
6.20	Equipment is provided with **adequate service clearance** to allow for regular maintenance	3	4	12	Heat pumps above ceiling in a few areas. Several classrooms have been converted to floor mounted.

MP | Mechanical & Plumbing

ASSESSOR: Chuck Heldenbrand

		Weight Factor	Rating	Points	Comments
6.21	AHUs and chiller are provided with **coil pull space.**	2	N/A	0	
6.22	**Filter** sizes are standard and filter types are standard.	2	4	8	Various filter sizes
6.23	**Equipment mounting heights** are reasonable.	3	4	12	Heat pumps above ceiling in areas. Some areas have heatpumps floor mounted.
6.24	**Floor surfaces** throughout the mechanical room are non-slip and are dry.	2	5	10	
6.25	**Isolation valves** are located in the plumbing and hydronic systems to allow for isolation of only portions of the system for servicing.	2	5	10	
6.26	Appropriate means are provided for **airflow and water balancing.**	3	5	15	
6.27	**Hose Bibbs** located in proximity to **outdoor condensers and condensing units**. Is cottonwood an issue at this location?	2	4	8	No hydrant on roof for cleaning DOAS unit condenser coils
6.28	**Fall protection** is provided for equipment within 15 ft of roof edge.	2	3	6	Some perimeter equipment does not have fall protection
6.29	**Building devices are on DDC controls** and fully visible through Building Automation System. No pneumatic controls remain.	4	5	20	New DDC throughout during recent HVAC upgrade.
Occupant Safety					
6.30	**Backflow prevention** is provided at all **cross-connections** to non-potable water.	5	5	25	

MP | Mechanical & Plumbing

ASSESSOR: Chuck Heldenbrand

		Weight Factor	Rating	Points	Comments
6.31	Building is fully **sprinklered.**	5	5	25	
6.32	**Domestic hot-water temperature** at lavatories used by students or staff is provided with a thermostatic mixing valve and adjusted properly.	5	4	20	Additional balancing and use of digital mixing valve or fixture based device
6.33	**Emergency eye-washes and tempering valves** are located where required.	5	0	0	Eyewash not observed. Recommend evaluation with an occupational safety and health professional to determine if eye irrigation is needed.
6.34	**Emergency boiler stop switches** are located at exits from boiler rooms.	5	4	20	Located on interior of boiler room.
6.35	**Refrigeration evacuation systems** are provided in rooms with chillers.	5	N/A	0	
6.36	**Carbon Monoxide monitoring** and alarming is provided for areas with gas-fired equipment.	5	0	0	No CO detector at gas fired domestic hot water heater.
	TOTAL			556	

E | Electrical

ASSESSOR: Rob Hedgepeth

7.0 Electrical Systems

Electrical Design

		Weight Factor	Rating	Points	Comments
7.1	**Transformer location** is easily accessible by utility line truck to allow for rapid transformer replacement in the event of an issue.	5	5	25	
7.2	**Transformer** has adequate clearance from non-combustible building components, paths of egress, etc. 10' clear working area in front of doors.	5	5	25	
7.3	**The MDP environment** is safe, has adequate clearances and exiting.	3	5	15	1200a 480y/277v Square D
7.4	The **MDP** appears serviceable.	4	5	20	
7.5	The MDP is **maintainable.**	3	4	12	
7.6	The MDP will support **future expansion.**	4	4	16	69/117 41% spare
7.7	The Distribution Panel **environment is safe**, has adequate clearances and exiting.	4	5	20	
7.8	The Distribution Panel appears **serviceable.**	4	2	8	Main DP is outdated Frank Adams panel and should be replaced.
7.9	The Distribution Panel is **maintainable.**	4	0	0	Main DP is outdated Frank Adams panel and should be replaced.
7.10	The Distribution Panel will support **future expansion.**	4	0	0	Parts availability is limited.

E | Electrical

ASSESSOR: Rob Hedgepeth

		Weight Factor	Rating	Points	Comments
7.11	**Electrical panels and disconnect switches** observed during assessment are safe, serviceable, and maintainable.	2	3	6	Old Frank Adams panels left in corridor. Not locked. All breakers shut off. (Abandoned?) Many unplugged breaker spaces, esp in 480/277v heat pump branch panels
7.12	Building has adequate and appropriately located, **safe exterior power** to allow for regular maintenance activities.	1	3	3	Seemingy random placement. Covers broken.
7.13	Building has adequate **exterior lighting** to promote safety and security of the property.	5	5	25	
Electronic System Design					
7.14	MDF is **neatly organized** and has appropriate clearances and working spaces. Cables are neatly laced or trained. Entry to the room is restricted.	4	5	20	Fiber from Weeks.
7.15	MDF Equipment Racks have adequate space for **future growth.**	4	5	20	
7.16	MDF is equipped with UPS to back up main switch(es), providing **backup power** to necessary equipment in the event of a power outage.	5	5	25	Two minuteman 2kVA
7.17	MDF Power is supplied by **20A circuits and receptacles.**	1	3	3	MDF has 15A receptacles.
7.18	MDF Power is supplied from a branch panel located in the room with **adequate spare circuit capacity.**	1	0	0	No branch panel in room
7.19	MDF employs up-to-date **network cabling.**	2	3	6	Building has a mix of Cat 5, 5e, and 6A cables.
7.20	MDF is connected to Intermediate Distribution Frame (IDF) closets with **fiber optic cabling.**	1	5	5	Rms 145 and 163 IDFs do not have UPS

E | Electrical

ASSESSOR: Rob Hedgepeth

		Weight Factor	Rating	Points	Comments
7.21	MDF has adequate **grounding busbar capacity.**	2	5	10	MDF rack does not appear to be grounded. IDF racks also not grounded.
7.22	Building is equipped with an **addressable fire alarm system.**	5	3	15	Panel not located in MDF room. In elec room across the hall. Simplex 4100ES.
7.23	Building is equipped with an **access control system.**	5	2	10	5/14=36%
7.24	Building is equipped with a **CCTV system.**	5	4	20	Add cameras at playground/west entrance.
7.25	Building is equipped with an **intercom system.**	4	5	20	
7.26	Building is equipped with a **master clock system.**	4	3	12	Simplex master clock located in office workroom. District standard is Primex master clock located in MDF.
	TOTAL			341	

RECOMMENDED PROJECTS AND COST ESTIMATING METHODOLOGIES

One of the major impetuses for our facility condition assessment work is the need to support strategic fiscal and maintenance planning for their facilities. As such, DMPS requires that recommended projects be assigned a total project cost in order to support the strategic planning needs of the District. A total project cost is a cost that includes the estimated construction cost as well as the various other 'hard' and 'soft' costs of a construction project such as professional design fees, contractor overhead, required contingencies, inflation, direct costs (e.g. permitting costs), etc. The full list of these hard and soft costs are defined later in this section.

Project Descriptions

Every building assessment report includes a section titled Recommended Projects and Priorities. This section is divided into the following subcategories: "Short Term Maintenance", "1-2 Year Project Priorities", "3-4 Year Project Priorities", "5 - 10 Year Project Priorities", and "Projects Requiring a Study". Each of these subcategories includes a list of project recommendations. The projects listed in each subcategory are grouped by discipline and listed in the following order: interior architecture, exterior architecture, civil (site), structural, mechanical, electrical, and elevator projects. The discipline order as described mirrors the order of the discipline Scoring Reports section found earlier in the building assessment report. The projects listed within Short Term Maintenance section do not include a cost. It is assumed that DMPS will perform this work. Additionally, projects which recommend furniture repair or replacement do not include a cost since furniture systems are selected and procured via a separate process. All other projects associated with the remaining subcategories, other than "Projects Requiring a Study" are provided an estimated total project cost.

Projects Requiring a Study

The projects listed within Projects Requiring a Study are provided estimated professional design fees to produce the recommended design study. In the future, once commissioned and completed, these recommended studies will not produce a completed design. Rather, the completed study will provide recommended project descriptions and estimated total project costs similar to the projects listed in this assessment report. For studies that most likely will result in a substantial project with a substantial cost associated, an "anticipated capital investment" cost number has been provided to help assist the District's strategic planning. This anticipated capital investment cost is based on a 5-10 Year Priority completion date and very high level general 'rules of thumb' estimations since it is unknown exactly what conclusions or recommendations will be determined by the study before the study is commissioned and completed.

Cost Estimating

To achieve the total project cost reflected in this building report, the recommended projects incorporate construction costs with added percentages to account for professional design services, design phase contingency, construction contingency, general contractor overhead and profit, other direct costs incurred by the project, and year-over-year inflation dependent on how many years out the recommended project is recommended to be completed. Not included in the total project cost are costs associated with hazardous materials abatement, testing, surveys, or site exploration (geotechnical testing, etc.). Additionally, for projects that are expected to produce a minimal amount of waste that is normally acceptable to City of Des Moines collection, costs for dumpsters have been excluded. To arrive at the final estimated total project cost as described above, the following methodology was used by the assessment team for each recommended project:

Step 1: Determine estimated direct cost of construction in 2024 dollars.

The recommended projects are conceptual in nature; therefore, all cost multipliers are overall systems level and/or unit costs. (These costs are not based on itemized breakdowns.) The cost information used is based on current available information which is in 2024 dollars and is a mixture of recent bids, firm experience, manufacturer provided information, and RS Means costing data.

Step 2: For recommended projects that are smaller in scale, scope, and estimated cost, a "small project fee" additive cost is applied to the estimated direct cost of construction determined in Step 1. This additive cost works to cover outsized mobilization, staffing, and equipment costs that are incurred on a small scale project the same as for a large project with a large economy of scale. These costs are as follows:

For projects with a Step 1 cost of $4,999.99 or less, an additive cost of $5,000.00 has been added.

For projects with a Step 1 cost of $5,000.00 to $14,999.99, a graduated additive cost from $5,000.00 to $0 has been added.

For all other projects (Step 1 cost of $15,000.00 and above) this step is skipped.

Step 3: Add 10% of the estimated direct construction cost for construction contingency.

RECOMMENDED PROJECTS AND COST ESTIMATING METHODOLOGIES

Step 4: Add a percentage of estimated direct construction cost plus construction contingency for inflation.
The projects are grouped based on how many years out it is recommended that the project is started. Projects closer to 2024 are more urgent projects. As project start times move further and further away from 2024, inflation must be added to best estimate how 2024 dollars will translate into the future. 5% year-over-year inflation was chosen as a reasonable assumption for this work.

- For projects assigned the 1-2 Year Priority add 10% of the estimated construction cost.
- For projects assigned the 3-4 Year Priority add 20% of the estimated construction cost.
- For projects assigned the 5-10 Year Priority add 50% of the estimated construction cost.

Step 5: Add 5% of the estimated direct construction cost, construction contingency, plus inflation for general conditions.
This cost covers the incidental costs incurred by the contractor to perform the work that are not directly tied to the specific materials and labor; examples include mobilizing to the site and final cleaning.

Step 6: Add 10% of the estimated direct construction cost, construction contingency, inflation, plus inflation for general contractor overhead and profit; combined, this is the total construction cost.

Step 7: Add 10% of the total construction cost for professional design services.
These services include, when appropriate: architectural design and project management, civil engineering, structural engineering, mechanical engineering, and electrical engineering. These services are for conceptual design through construction phase work.

Step 8: Add 5% of the total construction cost and professional design services for other direct costs.
These costs cover various other costs directly associated with the project such as printing, equipment, required permits, etc.

At the conclusion of Step 8, the total project cost for the recommended project is finalized.

PROJECT RECOMMENDATIONS

Below are recommended maintenance, projects, and studies based on the previous assessment scoring information. Short Term Maintenance items are items requiring DMPS attention in less than a year's time and is less than $5,000. Costs for these items are not estimated. 1-2 year priority projects are projects that require attention within the next 2 years. 3-4 year priority projects are projects that require attention within the next 4 years. 5-10 year priority projects are projects that require attention within the next 10 years. Project quantities are all estimated based on observations. These are not measured or verified quantities. Project costs are listed. Project requiring Study are items where project scope is not able to be defined at this time and further investigation is required. Costs for these items are design service fees, not project costs. See the Cost Methodology description for additional information.

Short Term Maintenance

Replace Walk-Off Mats	Replace damaged walk-off entrance mats at all exterior doors.
Interior Door Adjustments	Doors to room 161 do not close properly due to room pressurization. Adjust closers as required for doors to fully close. Repair damaged/loose lock cylinder at south door of room 164.
Investigate Water Leak	Further investigation is required to determine the source of water stains on ceiling tiles in room 162A. The above-ceiling space was not accessible during assessment due to stored items in the room. This room is located directly below a roof / exterior wall transition which may be allowing water infiltration. Once a cause is determined, this may result in the need for a larger study or project.
Exterior Door Adjustments	Adjust closers and latches on the exterior double door at the southwest corner of gymnasium 167.
Clean and Repair Roof Drains	Remove debris from all roof drains. Install missing roof drain cover at the east end of roof area C. Refer to the roof identification image in the appendix.
MDF Grounding	TMGB with conductor from outside room, but MDF rack is not bonded. IDF racks do not appear to be grounded either. Install jumpers to bonding busbars.
Install Carbon Monoxide Detector	Install Carbon Monoxide Detector in Mechanical Room as there are gas-fired water heaters.

1 - 2 Year Priority

		Project Costs
Add Mop or Kick Plates to Wood Doors	Install mop protection plates on one side of all wood doors accessed from corridors to prevent further damage to wood doors from floor cleaning (approximately 45 doors).	$13,000
Replace Sealant at Exterior Walls	Replace 350 LF of 3/8" sealant joints and 875 LF of 1" sealant joints at EIFS walls, gymnasium walls, and roof area D.	$25,000
Masonry Repointing	Replace brick masonry joints over an area of approximately 150 SF in various locations, primarily along the north façade of the building.	$8,000
Repainting Exterior	Repaint exterior steel elements including canopy supports and soffits with metal substrates. 800 SF of repainting over seven locations.	$11,000
Soffit Finish Repair	Repair direct-applied finish system at soffit outside room 164 in the courtyard (200 SF) and at the east entrance near room 117 (80 SF).	$11,000
Playground Tripping Hazard Repairs	Fix tripping hazards by the entryways onto the playground. Three entryways to repair. For locations refer to civil site plan exhibit found in the appendix of this report.	$7,000
Pavement Replacement	Remove and replace 20 SY of PCC and 306 SY of asphalt. Install 38 SY of reinforced PCC in front of trash enclosure. For locations refer to civil site plan exhibit found in the appendix of this report.	$50,000
Sidewalk Repair	Repair damaged sidewalks across the site. Approximately 106 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$20,000
Curb Repair	Return damaged curbs to new condition. Approximately 37 LF of 6" curbs. For locations, refer to civil site plan exhibit found in the appendix of this report.	$7,000
Stoop & Railing Replacement	Remove and replace concrete stoop and railing at entrance near room 115. Approximately 120 SF concrete stoop and 30 LF of railing.	$30,000

Stoop & Framing Replacement	Remove and replace concrete stoop and steel framing at canopy near rooms 127 and 129. Approximately 150 SF concrete stoop and 160 LF of canopy.	$45,000
Steel Lintel Repair	Sandblast and repaint 9 steel lintels (9 SF each) on south exterior wall between the southwest corner of room 175 and the southeast corner of room 117.	$7,000
Improve Roof Equipment Access	Add fall protection at portions of roof containing mechanical equipment that is less than 15 feet from a roof edge. Provide improved permanent pathways to access roof-mounted equipment.	$15,000
Electrical Distribution Upgrades	Design and replace outdated/original electrical components. A full evaluation of the building's electrical distribution system will be required for most accurate costing. Costs based on 6 panels and 1 distribution panel replacement.	$110,000
	Total 1-2 Year Project Costs:	**$359,000**

3 - 4 Year Priority

		Project Costs
Casework Repainting	Repaint all painted wood veneer casework doors and boxes in classrooms. Approximately 180 SF of painting in each of 23 rooms.	$20,000
Acoustic Improvements	Install acoustic baffles and/or acoustic wall panels in the gymnasium (1,300 SF) and music room (350 SF) to improve sound absorption and reverberation time. Approx. 550 SF material.	$25,000
Roof Access	Provide roof access ladders to roof areas D (4 feet high) and M (7 feet high). Provide guardrail at roof hatch. Refer to the roof identification image in the appendix.	$12,000
Pavement Replacement	Remove and replace 1,709 SY of asphalt. For locations refer to civil site plan exhibit found in the appendix of this report.	$250,000
Sidewalk Repair	Repair damaged sidewalks across the site. Approximately 91 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$20,000

Install Grease Interceptor	Install an exterior grease interceptor to meet City of Des Moines requirements.	$530,000

Total 3-4 Year Project Costs: $857,000

5-10 Year Priority

		Project Costs
Replace Damaged VCT Flooring	Replace 200 SF total of damaged VCT flooring in corridors outside rooms 116, 125, 127, and 148.	$7,000
Roof Replacement	Remove 73,000 SF of PVC roofing and insulation over roof areas C through P. Install code compliant insulation and TPO roofing.	$2,400,000
Pavement Replacement	Remove and replace 20 SY of PCC. For locations refer to civil site plan exhibit found in the appendix of this report.	$9,000
Sidewalk Repair	Repair damaged sidewalks across the site. Approximately 149 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$35,000
Playground Asphalt Replacement	Take out and restore deteriorated playground asphalt. Approximately 187 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$35,000
Fence Replacement	Remove and replace 393 LF of 6' chain link fence. For location, refer to civil site plan exhibit found in the appendix of this report.	$55,000

Total 5-10 Year Project Costs: $2,541,000

Projects Requiring Study

		Design Services Fee
Mother's Room Space Study	Study to define a private dedicated space for a Mother's Room that includes at least a sink, side table, chair, and privacy door hardware.	$5,000

Modify Ductwork to Eliminate Corridor Return	The return grille in the corridor for Unit "B" is used to return ventilation air delivered to he Classrooms back to the DOAS unit, using the corridor as a return plenum. This is a code violation and should be addressed. Study alternate paths to return air back to the DOAS unit in Unit "B" by not using the corridor. Anticipated Capital Investment $550,000	$5,000
Designated Hardened Area	No designated hardened area was observed. Study to determine the feasibility of adding a designated hardened area, including location, within the existing building, schematic design concept if deemed feasible, and preliminary project costs.	$2,500
	Anticipated Capital Investment Costs:	**$550,000**
	Total Study Design Service Fees:	**$12,500**

APPENDIX

5+ YEAR REPLACEMENT

3-4 YEAR REPLACEMENT

1-2 YEAR REPLACEMENT

NORTH

GRAPHIC SCALE

60 0 30 60 120

bbs ARCHITECTS ENGINEERS

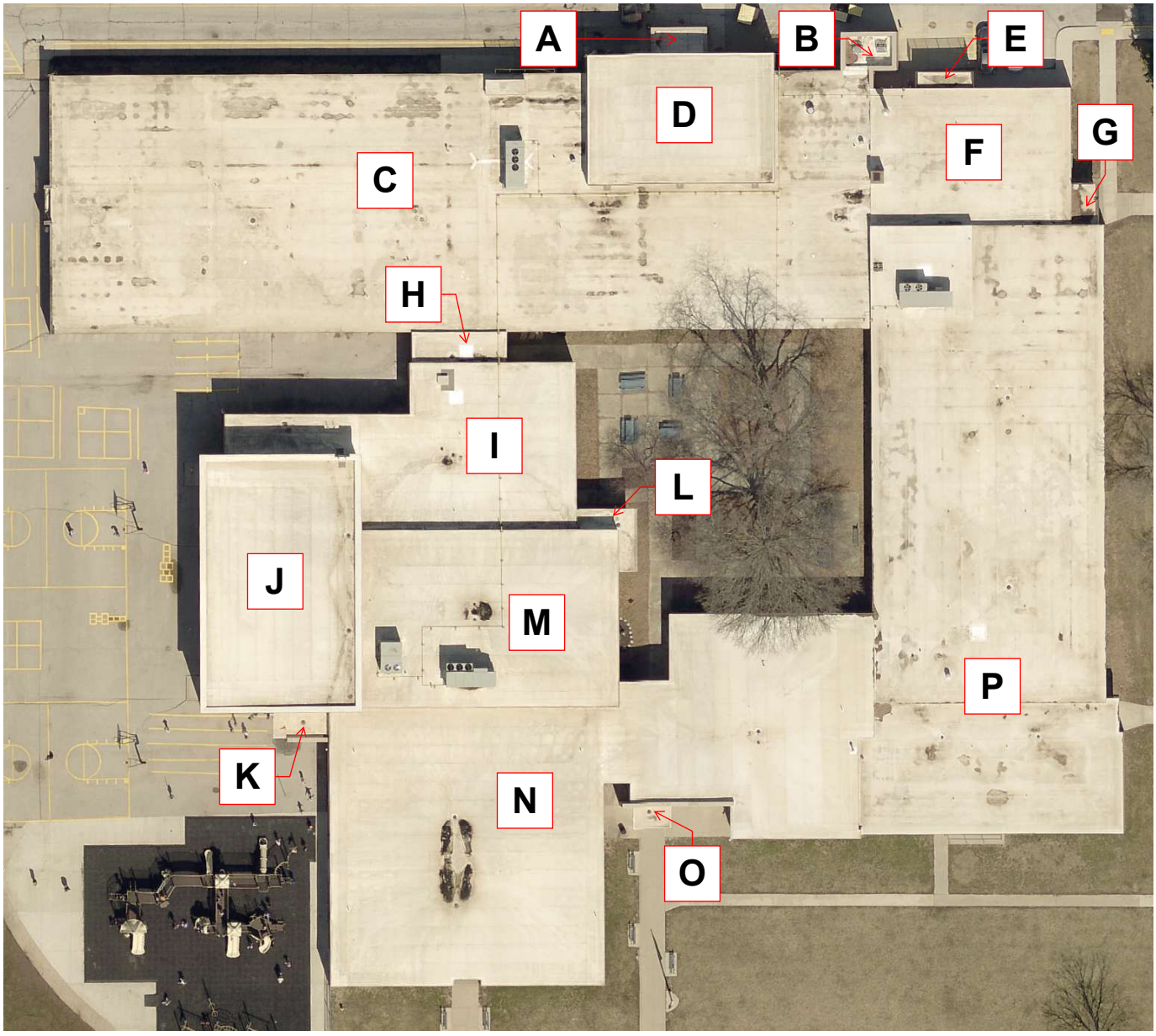
BISHOP ENGINEERING +

MORRIS ELEMENTARY

EXHIBIT

PROJECT # 230286-23

DATE 10/24/2023



N

bbs ARCHITECTS ENGINEERS

23055 - DMPS Facility Conditions Assessment
Roof Identification Image
Morris Elementary
November 7, 2023

MORRIS ELEMENTARY SCHOOL

1401 GEIL AVENUE
DES MOINES, IOWA 50315

FIRST FLOOR

NORTH

- Core Classroom
- Student Support
- Administration
- Large Shared Space
- Other

bbs ARCHITECTS ENGINEERS