DMPS FACILITY ASSESSMENT | HUBBELL ELEMENTARY

1.10.2024

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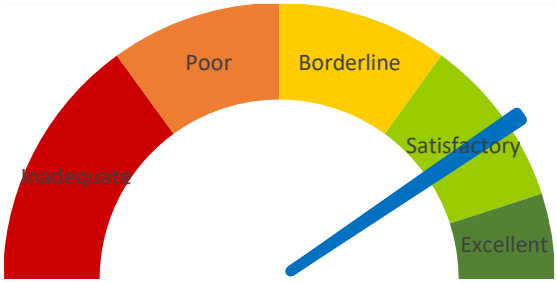


REPORT ORGANIZATION

EXECUTIVE BUILDING SUMMARY

Hubbell Elementary's on-site facility conditions assessment was conducted on January 10, 2024 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 few of the short term maintenance items identified for Hubbell Elementary are: interior door latch repairs, egress path clearing, lock repair, guardrail stabilization, and minor grading repairs. Overall Hubbell Elementary appears to be regularly maintained, but items are starting to show age and wear, likely needing more than just minor maintenance. Continued, dedicated, maintenance following these projects will greatly extend the life of the building.

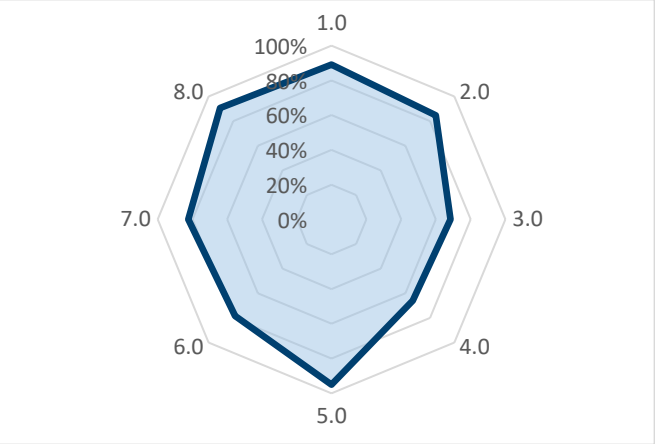
A summary of the recommended projects for Hubbell Elementary to be completed in the next 1-2 years are as follows:

- Interior Improvements (more description in following report pages)
- Exterior Door Replacement
- EIFS and Sealant Repair
- Site Improvements
- Exterior Lintel Repairs and Replacement
- Hot Water Repairs
- MDF Panelboard Installation
- Exterior Lighting Additions
- CCTV Upgrades
- Elevator Part Replacements

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	147	2.00	330	294	89%	Satisfactory
2.0	Environment for Education	375	318	0.60	225	191	85%	Satisfactory
3.0	Exterior Envelope	95	65	3.00	285	195	68%	Borderline
4.0	School Site	100	66	1.50	150	99	66%	Borderline
5.0	Structural Conditions	140	133	1.30	182	173	95%	Excellent
6.0	Mechanical Systems	660	518	0.80	528	414	78%	Satisfactory
7.0	Electrical Systems	375	309	0.75	281	232	82%	Satisfactory
8.0	Elevator Conditions	65	59	1.00	65	59	91%	Excellent
Total					**2,046**	**1,657**	**81%**	**Satisfactory**

Hubbell 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 Hubbell Elementary scored a building health rating of 81% 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. Hubbell Elementary is within this positive range. Improvements to the exterior envelope and school site would make the largest impact in increasing the score to "Excellent".

Building Data Record

Building Name: **Hubbell Elementary**

Date: **1.10.2023**

Address: **800 42nd St**
Des Moines, IA 50312

High School Feeder System: **Roosevelt High**

Building SF: **50,505 SF**

Site Acreage: **4.37 Acres**

Date(s) of Construction: **1910, 1925, 2003, 2006**

Date(s) of Roof Replacement: **1995, 2007, 2019**

Current/Scheduled Projects: **Acoustics in gym, café, music, and all classrooms - 2024/2025**

Existing Building Data:

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

Site Items:

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

Energy Source:

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

Cooling:

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

Heating:

- [x] 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
- [x] Other
  Cold Formed Metal Framing

Exterior Facade:

- [x] Brick
- [x] Stucco
- [ ] Metal
- [ ] Wood
- [ ] Other

Floor/Roof Structure:

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

A | Architectural, Programming

ASSESSOR: Kaela Shoemaker

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	5	10	
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	No specific band/orchestra room observed. Main Music room is satisfactory.
1.5	**Art room** has sufficient accommodations for program.	2	3	6	Limited storage and no kiln or kiln room observed. Casework is showing significant use and damage.
1.6	**Library/Resource/Media Center** provides appropriate and attractive space.	1	4	4	Furniture is in good condition but is just tables and chairs. No soft seating or reading nook spaces. Room has excellent daylight and views to the exterior. Stained glass to the corridor is unique to the school and space.
Core Classroom					
1.7	Classroom space permits arrangements for **small group activity.**	3	5	15	
1.8	**Student storage space** is adequate.	2	3	6	Several classrooms, in lower and upper grades, do not have student storage built in.
1.9	**Teacher storage space** is adequate.	3	3	9	Not in level 2 as observed and noted by staff, younger grades seem to be lacking in classroom storage. Shared teacher storage is provided in a large work/ prep room.
1.10	Classroom **acoustical treatment** of ceiling, walls, and floors provide effective sound control.	3	5	15	

A | Architectural, Programming

ASSESSOR: Kaela Shoemaker

		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	4	4	There is a medium sized conference room for 3 - 6 people and a large teacher prep room with a conference table. Other meeting spaces are limited to offices or classrooms.
1.14	**Main office** has a check-in and waiting area.	2	5	10	
	TOTAL			147	

A | Architectural, Interior

ASSESSOR: Kaela Shoemaker

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	4	4	Large corridors provide a space for display in passing. No set apart commons areas observed.
2.3	Areas for students to **interact are suitable to the age group.**	1	3	3	Spaces are available for group collaboration but these areas are not furnished with flexible or soft seating. Library, classroom reading zone, and break out rooms would be ideal opportunities for varied seating.
2.4	Large group areas are designed for effective **management of students.**	2	4	8	Classroom 123 has a unique arrangement that cuts off half of the room from sight. A fish eye mirror has been provided for better visual of the full room. Other areas are adequate.
2.5	**Furniture Systems** are in good or like new condition.	1	4	4	Older models of student desks and chairs. Minor surface damage in a few kindergarten rooms, but otherwise good condition.
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	Many views look into the interstate, but large windows provide excellent daylight and excellent ability to look out a great distance.
2.9	**Lighting has proper controls** to provide the required light levels for various teaching and learning needs.	2	3	6	Classrooms do not having dimming or zone control. Most classrooms appeared to keep lights off while class was in session.
2.10	**Staff dedicated spaces** include conference space, work space, and dedicated restrooms.	1	5	5	

A | Architectural, Interior

ASSESSOR: Kaela Shoemaker

		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	None observed
Maintainability					
2.14	**Floor surfaces** are durable and in good condition.	1	3	3	Broadloom carpet through level 2 and 3 classrooms is fraying and showing wear and staining in high traffic areas.
2.15	**Ceilings** throughout the building – including services areas – are easily cleaned and resistant to stain.	1	4	4	Classrooms ### and ### have minor water spots and missing panels, that maybe part of an ongoing issue that is in process of being resolved.
2.16	**Walls** throughout the building – including services areas – are easily cleaned and resistant to stain.	1	4	4	Many classroom walls are showing scuffs and paint peeling where items have been hung
2.17	**Built-in casework** is designed and constructed for ease of maintenance.	1	3	3	Very little built in casework, but in varying condition throughout. The special education room is in poor condition with parts pulling loose. Other wood countertops have multiple layers of peeling paint. Enclosed wood storage that is full door height is in good condition.
2.18	**Doors** are either solid core wood or hollow metal with a hollow metal frame and well maintained.	3	3	9	Doors on level 2 and 3 have significant chipping at the base.
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: Kaela Shoemaker

		Weight Factor	Rating	Points	Comments
2.21	**Adequate electrical outlets** are located to permit routine cleaning in corridors and large spaces.	1	4	4	Appears to be present but slightly further apart then recommended.
Occupant Safety					
2.22	Classroom doors are **recessed and open outward.**	4	4	16	Doors do open out but are Not recessed, however corridors are extra wide and lockers against the walls provide some minimal buffer from traffic flow and door swing. While this is not ideal for current code there is no immediate safety concern.
2.23	Door hardware (into classrooms or any occupied rooms off of corridors) include **intruder classroom locksets.**	3	4	12	Many door stops or foam door panel stops were used to prop doors open. The boiler room door latch was taped to prevent locking. This is a safety concern due to the equipment located within that room.
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	4	8	1/3rd of the classrooms had covered lites. Most were paper covered, one had a partially covered lite with a curtain.
2.26	**Glass** is properly located and protected to prevent accidental injury.	2	5	10	Note: wire glass is present at the stair enclosures and elsewhere throughout the building.
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	5	25	
2.30	**Stairs (interior and exterior)** are well maintained and in good condition meeting current safety requirements.	5	2	10	Guardrails have been extended to meet current height requirements. Handrails in both stairs are loose at varying points. Both stairs to rooms on level 3.5 have loose guardrails and no handrail on the wall sides.

A | Architectural, Interior

ASSESSOR: Kaela Shoemaker

		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	4	20	Special education classroom appears to have covered the exit light with a blanket.
	TOTAL			318	

A | Architectural , Exterior

ASSESSOR: David Unick

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	5	10	No comments.
Maintainability					
3.2	**Roofs** appear sound, have positive drainage, and are water tight.	3	4	12	Roofs are generally in good condition, with exception of ventilator structures on Roof D. (See appendix for roof identification plan.) All areas of the building anticipated to reach end of service life in approximately 10 years.
3.3	**Roof access** is safe for all roofs.	3	3	9	Roof hatch access to Roofs C and D. Access to D should be replaced with new interior ladder and new hatch. Provide guards at each hatch.
3.4	Exterior **window sealant** is fully intact without cracks or gaps.	3	2	6	Most perimeter sealant at windows on original building should be replaced in 3-4 years.
3.5	**Glazing** is low-e coated, insulated, and overall in good condition.	1	4	4	Insulating glazing in place except at original building stairwells where original leaded glass is sealed behind fixed storm windows. Low-E Coating indeterminate.
3.6	**Operable windows** are functional and safe. Operable portion of window fully seals when closed without gapping or leaking.	2	4	8	No significant issues noted.
3.7	**Exterior doors** are of durable material requiring minimum maintenance.	2	2	4	Original wood frames in place on east side of original building. They are in good condition but should be painted. Several steel doors have rust. Some require repair others replacement
3.8	**Exterior walls** are of material and finish requiring little maintenance,	1	3	3	Primary wall material is brick. Some EIFS in place on upper walls of gym. Sealant in masonry soft joints and in EIFS will require replacement in 3-4 years.
3.9	**Exterior Doors** open outward and are equipped with **panic hardware.**	1	5	5	No comments.
3.10	**Exterior Doors are monitored** or controlled by an access control system.	1	4	4	All doors appear to latch acceptably. (3) entrances have card readers. (4) entrances have keyed hardware. (2) entrances have no exterior hardware. All entrances have exterior identification signage.
	TOTAL			65	

C | Civil

ASSESSOR: Jack Gorman, Joel Jackson

4.0 The School Site

		Weight Factor	Rating	Points	Comments
4.1	**Site topography** and grading drains water away from the building and retaining walls.	1	4	4	Issue around tree NE of the playground asphalt and one hole to fill in on the east side of the building, good drainage otherwise.
4.2	**Parking areas** are in good condition.	5	3	15	The parking asphalt was cracking throughout with the west side being worse than the east.
4.3	**Drive areas** are in good condition.	3	3	9	Some of the cracking asphalt has sealer applied to it but there still sections needing replacement. Same as the parking area, west is worse than the east.
4.4	**Sufficient on-site, solid surface parking** is provided for faculty, staff, and community.	1	3	3	DMPS states parking is maxed out for day to day use with no room to expand and the only event parking is along Center Street or at Roosevelt High School.
4.5	**Sidewalks** around the facility are in good **condition.**	1	3	3	Sections of the south walk by the parking lot are in need of immediate replacement, other isolated areas need replacement across site.
4.6	**Sidewalks are located** in appropriate areas with adequate building access.	1	5	5	All doors with sidewalk access.
4.7	**Hard surface** playground surfaces are in good condition.	3	4	12	The NE asphalt corner is cracking, unclear if tree roots or subsurface moisture issues are the cause.
4.8	**Fencing** around the site is in good condition.	1	5	5	All appeared to be in good condition.
4.9	**Trash enclosure** is in good condition.	1	4	4	Some of the pavement in front of the dumpsters was cracking, recommend to replace with reinforced PCC.
4.10	**Utilities** are in newly constructed conditions and placed in suitable locations.	1	4	4	Intake in the circle drive needs replacement, all other utilities appeared in good condition.

ASSESSOR: Jack Gorman, Joel Jackson

		Weight Factor	Rating	Points	Comments
4.11	**Site has sufficient room** for both building and parking expansion.	1	1	1	Site lacks space for expansion.
4.12	Site has **onsite bus and parent pickup** up with adequate length, good separation and general good site circulation.	1	1	1	Buses use the south side of the building and parents use the circle drive. DMPS states there are many conflicts on site with a lot of congestion between the buses and parents and that bus drop off conflicts with traffic.
	TOTAL		66		

S | Structural

ASSESSOR: Tyler Scott, P.E.

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	4	4	Mechanical room exterior basement wall has a lot of efflorescence.
5.4	**Stoops** appear to be in good condition.	1	5	5	
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	5	10	
5.8	**Lintels** appear in good condition (no visible deflection or rust).	1	4	4	Several steel lintels have excessive warping. The warping appears to have been previously addressed with steel plate shims. Of the warped some had a higher degree of rust than the lintels that were not warped. All brick veneer appeared to be in stable condition with no cracking or signs of distress.
5.9	**CMU** is in good condition.	1	5	5	
5.10	**Precast** is in good condition.	1	N/A	0	

S | Structural

ASSESSOR: Tyler Scott, P.E.

		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	5	15	
5.13	Floor framing appears to meet the **code requirements.**	3	5	15	
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	5	5	
5.16	**Canopies** appear to be in good condition.	1	5	5	
5.17	**Loading dock concrete** appears to be in good condition.	2	N/A	0	
5.18	**Mechanical screening** appears to be in good condition.	2	5	10	
5.19	**Stairs** appear to be in good condition.	1	5	5	
5.20	**Stair railings** appear to be in good condition.	1	5	5	

S | Structural

ASSESSOR: Tyler Scott, P.E.

		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	
5.23	The hardened area appears consistent with the **ICC 2018 code.**	1	N/A	0	
	TOTAL			133	

MP | Mechanical & Plumbing

ASSESSOR: Corey Metzger

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	Appears to be true.
6.2	**Thermostat location.** Thermostats are properly located in the space.	3	4	12	A few near windows, which is not ideal. Otherwise, generally true.
6.3	Appropriate **amount of ventilation** are provided to each space.	5	3	15	Values appear to be in approximately expected ranges, though on the low end of range for a number of spaces.
6.4	**Ventilation** is provided during occupied hours.	5	5	25	Yes
6.5	**Outdoor air intake locations** are appropriate.	4	4	16	Primary outdoor air intake is low near playground - shouldn't be smoking or other major contaminant sources at this location, but would be ideal to be further from the ground.
6.6	Appropriate **levels of exhaust** are provided for areas requiring this such as restrooms, janitor's closets and locker rooms.	5	3	15	Generally appears true - a few spaces appear to be short based on observed odors.
6.7	**Building pressurization.** The design takes into account the balance between ventilation and exhaust air	2	5	10	Appears to be true.
6.8	**Major HVAC Equipment** appears to be within it's acceptable **service life.**	5	2	10	Much of the building equipment is at or beyond the end of its expected useful life - boilers are newer and appear to have significant remaining useful life.
6.9	**Cooling loads** are within equipment operational capacity.	5	5	25	Appears true.
6.10	**Heating loads** are within equipment operations capacity.	5	5	25	Appears true.

MP | Mechanical & Plumbing

ASSESSOR: Corey Metzger

		Weight Factor	Rating	Points	Comments
6.11	**Dehumidification** is provided and addressed humidity loads in incoming outside air.	3	1	3	Does not appear to be provided.
Plumbing Design					
6.12	**Water Supply Pressure** is adequate to allow for operation of plumbing fixtures.	5	5	25	Appears acceptable.
6.13	Appropriate **backflow preventer** is provided at connection to city water supply.	5	4	20	Yes- single
6.14	**Domestic hot-water systems** are within equipment operational capacity.	5	5	25	Appears true.
6.15	Domestic **hot-water recirculating systems** allow for hot-water at fixtures within a reasonable amount of time.	3	3	9	Recirculating system is installed only for EWH-4 on Ground Flr. Other three water heaters are installed within proximity to the water heater, though the Wash Fountain on the Third Floor is likely furthest away and takes some time to get hot-water to it.
6.16	**Sanitary sewer systems** are sized and sloped to allow for proper drainage.	5	5	25	Appears true.
6.17	Appropriately sized **grease interceptors** are provided for facilities with food service.	3	5	15	Yes
6.18	**Roof drainage** systems are sized appropriately and overflow drainage systems are installed.	5	5	25	Scuppers or overflow drains are typically provided for secondary drainage.
6.19	**Restroom fixtures** are in good condition and comply with current DMPS standards.	3	3	9	Varies - combination of manual and automatic flush valves.
Maintainability					
6.20	Equipment is provided with **adequate service clearance** to allow for regular maintenance	3	4	12	Generally appears true - some equipment may be challenging to access in areas with tight ceiling spaces.

MP | Mechanical & Plumbing

ASSESSOR: Corey Metzger

		Weight Factor	Rating	Points	Comments
6.21	AHUs and chiller are provided with **coil pull space.**	2	3	6	Pull space at AHU is inadequate - coil could be pulled with limited re-work.
6.22	**Filter** sizes are standard and filter types are standard.	2	2	4	Various - Heat pumps, AHU, Console Heat Pumps, RTU.
6.23	**Equipment mounting heights** are reasonable.	3	5	15	Generally appears true.
6.24	**Floor surfaces** throughout the mechanical room are non-slip and are dry.	2	5	10	Yes
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	Yes
6.26	Appropriate means are provided for **airflow and water balancing.**	3	5	15	Yes
6.27	**Hose Bibbs** located in proximity to **outdoor condensers and condensing units**. Is cottonwood an issue at this location?	2	3	6	None observed at addition roof. but there are some wall hydrants at grade level.
6.28	**Fall protection** is provided for equipment within 15 ft of roof edge as per OSHA standard 1910.28(b).	2	N/A	0	N/A
6.29	**Building devices are on DDC controls** and fully visible through Building Automation System. No pneumatic controls remain.	4	4	16	Yes - Some antiquated controls observed.
Occupant Safety					
6.30	**Backflow prevention** is provided at all **cross-connections** to non-potable water.	5	5	25	Yes

MP | Mechanical & Plumbing

ASSESSOR: Corey Metzger

		Weight Factor	Rating	Points	Comments
6.31	Building is fully **sprinklered.**	5	5	25	Yes
6.32	**Domestic hot-water temperature** at lavatories used by students or staff is provided with a thermostatic mixing valve and adjusted properly.	5	0	0	None observed.
6.33	**Emergency eye-washes and tempering valves** are located where required.	5	0	0	Not observed. Recommend evaluation with an occupational safety and health professional to determine necessity of eye wash(es) for facility spaces.
6.34	**Emergency boiler stop switches** are located at exits from boiler rooms.	5	5	25	Yes
6.35	**Refrigeration evacuation systems** are provided in rooms with chillers.	5	N/A	0	N/A
6.36	**Carbon Monoxide monitoring** and alarming is provided for areas with gas-fired equipment.	5	5	25	Yes
	TOTAL			518	

E | Electrical

ASSESSOR: David Carlson

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	Service entrance consists of 500kVA 208/120V transformer.
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	3	9	MDP consists of Eaton Cutler-Hammer Pow-r-line C type switchboard. Light storage in front of gear and mechanical systems are encroaching upon MDP clear space(-1 point). Exiting is not to code but is grandfathered into an existing space (-1 point).
7.4	The **MDP** appears serviceable.	4	4	16	MDP installed in 2003 (-1 point for age greater than 10 years).
7.5	The MDP is **maintainable.**	3	5	15	All Eaton parts are available.
7.6	The MDP will support **future expansion.**	4	3	12	3 of 20 positions in MDP remain for 15% total spare capacity (-2 points for less than 25% spare).
7.7	The Distribution Panel **environment is safe**, has adequate clearances and exiting.	4	N/A	0	No distribution panels present.
7.8	The Distribution Panel appears **serviceable.**	4	N/A	0	No distribution panels present.
7.9	The Distribution Panel is **maintainable.**	4	N/A	0	No distribution panels present.
7.10	The Distribution Panel will support **future expansion.**	4	N/A	0	No distribution panels present.

E | Electrical

ASSESSOR: David Carlson

		Weight Factor	Rating	Points	Comments
7.11	**Electrical panels and disconnect switches** observed during assessment are safe, serviceable, and maintainable.	2	4	8	Main mechanical/electrical room is tight, but all clearances are met. Level 2 electrical panels do not meet code required clearances due to art supplies and tables.
7.12	Building has adequate and appropriately located, **safe exterior power** to allow for regular maintenance activities.	1	1	1	Exterior receptacles minimal, which is in line for schools of this age. No concerns about lack of receptacles unless requested by Hubbell personnel.
7.13	Building has adequate **exterior lighting** to promote safety and security of the property.	5	4	20	NE corner of building, along 42nd street, appears dark. West end of parking lot, near entrance to track is dark.
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	
7.15	MDF Equipment Racks have adequate space for **future growth.**	4	4	16	Data rack has 15 of 45 rack units remaining, 33% (-1 point for less than 50% spare).
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	
7.17	MDF Power is supplied by **20A circuits and receptacles.**	1	5	5	
7.18	MDF Power is supplied from a branch panel located in the room with **adequate spare circuit capacity.**	1	0	0	No panel present within the MDF. Circuits fed from adjacent mechanical/electrical room.
7.19	MDF employs up-to-date **network cabling.**	2	4	8	Majority of cabling present is CAT5e (-1 point for less than 6/6A).
7.20	MDF is connected to Intermediate Distribution Frame (IDF) closets with **fiber optic cabling.**	1	3	3	No IDF's present, but noted that MDF was fed with OM3 multi-mode cable rather than the district standard single-mode.

E | Electrical

ASSESSOR: David Carlson

		Weight Factor	Rating	Points	Comments
7.21	MDF has adequate **grounding busbar capacity.**	2	5	10	
7.22	Building is equipped with an **addressable fire alarm system.**	5	5	25	
7.23	Building is equipped with an **access control system.**	5	2	10	Of nine entrances, three do not have any sort of access control, two do not have any exterior door hardware, and the remaining three have full card access. Recommend studying the feasibility of adding card readers or simply additional motion detection to three unmonitored doors. 3/9=33%
7.24	Building is equipped with a **CCTV system.**	5	4	20	Although lighting appears adequate on south end of building, cameras render in black and white. Consider camera upgrades.
7.25	Building is equipped with an **intercom system.**	4	5	20	
7.26	Building is equipped with a **master clock system.**	4	4	16	Time clock system present is Simplex (-1 point for not DMPS standard of Primex).
	TOTAL			309	

EV | Elevator

ASSESSOR: Mike Brown - ATIS

8.0 Elevator Conditions

		Weight Factor	Rating	Points	Comments
Design					
8.1	**Size** meets minimum as directed by ADA.	2	5	10	
8.2	**Control protections and signals** meet ADA standards.	2	3	6	Phone is not ADA compliant
8.3	**Signage** meets code requirements.	1	5	5	
Operation and Safety					
8.4	Elevators have **proper level accuracy and door times.**	1	5	5	
8.5	**Safety devices** are in place and operable.	1	5	5	
Condition and Maintainability					
8.6	**Equipment is easily accessible** for periodic maintenance.	1	5	5	
8.7	**Equipment** is at an acceptable point in the life cycle, and does not contain obsolete parts.	2	5	10	
8.8	**Finishes** are adequate and maintainable.	1	4	4	The laminate on doors is chipped.
8.9	**Maintenance** is adequate.	1	5	5	
8.10	**Testing** is up to date, and all **record and logbooks** are present and filled out.	1	4	4	There are incomplete maintenance records.
	TOTAL			59	

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

Interior Door Latch Repairs	Door to stair 321 is catching and doesn't latch or if it does is very difficult to close and open. This is a fire rated and emergency egress path. Door hardware to storage 307 is installed upside down and therefore will not latch. Recommended to repair so that area can be secured.
Egress Path, Clear	Classroom 117 has 2 required exits. The singe door is blocked and the exit light covered. This is a City of Des Moines egress code violation and it is suggested this door remain accessible for emergency egress.
Lock door 133B	Door latch between rooms 133 and 124 has been taped open. This is an electrical room and the door should latch and lock for safety and security. It is recommended the tape be removed.
Guardrail Stabilization	Secure guardrail and handrail between level 2 and level 3.5 at stair 321 and 325. Additional wall blocking or bracing may be required.
Grading Repair	Fill in the hole with dirt outside the building entrance. For location, refer to civil site plan exhibit found in the appendix of this report.

1 - 2 Year Priority

		Project Costs
Casework Replacement	Wood countertops are damaged and nails are beginning to protrude in room 205. This room is currently used as a special education classroom and should be addressed to prevent injury. Approximately 40 LF of wood countertop/sill to be replaced. Wood countertops in room 313 are peeling and chipping, showing significant damage. Approximately 24 LF should be replaced. New counters to be solid surface.	$25,000

Door Protection Installation	Install mop plates on both sides to match adjacent hardware on base of all classroom wood doors. Base of doors is beginning to chip. If there is no remedy now, likely the doors will need to be replaced in the near future. Approximately 22 door leaves.	$13,000
Handrail Installation	Add handrail to the wall between level 3 and level 3.5 at both stairs. Approximately 10 LF of railing each.	$7,000
Exterior Door Replacement	Replace hollow metal doors and frames at Entrance No. 2 (single door-solid-with 4'x7' louver sidelight), No. 4 (double door-half-glass- with removable mullion), and No. 9 (pair of doors-half glass-only). (Door numbers reference identification signage on the entrances.)	$45,000
EIFS and Sealant Repair	Repair water-damaged EIFS on north side of gymnasium at parapet, Approx. 5 SF. Replace sealant in all masonry soft joints and in EIFS joints, 4 sides of gymnasium, including wall above cafeteria. (Approx. 550 LF.)	$11,000
Roof Repairs	Remove (2) 6'x6'x6' existing brick ventilator assemblies on Roof D. (Approx. 1' high EPDM membrane flashing. 335 SF total.) Provide new metal ventilators. Extend perimeter roof flashing on north portion of Roof D up to parapet cap. Reseal joints in terra cotta parapet cap, and seal top surface/back surface with elastomeric coating to match south portion of same roof. (580 SF flashing and 300 SF elastomeric coating.)	$35,000
Pavement Replacement	Remove and replace 129 SY of asphalt. For locations, refer to civil site plan exhibit found in the appendix of this report.	$20,000
Sidewalk Repairs	Repair damaged sidewalks across the site. Approximately 189 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$35,000
Mechanical Room Basement Wall - Repairs	Brick basement wall needs existing waterproofing paint removed and wall cleaned. Mortar joints need to be cleaned down to sound material then tuckpointed where needed. Approximately 800 sf of wall area.	$20,000

Exterior Brick Lintel Rust Repairs	Rusted steel lintels need to be cleaned and loose material removed down to sound material. New high performance coating and sealant shall be applied. Approximately 200 lineal feet of lintels.	$8,000
Exterior Brick Lintel Replacement, Partial	Exterior single angle lintels on, first floor at windows of rooms 112 & 117, shall be replaced with new L6X4X3/8 (LLH) galvanized angles. 11 total angles each one being 5'-4" long.	$14,000
Exterior Lintel Grouting, Partial	Many level 1 single angle lintels have gaps between the lintel and the supported brick above. These gaps should be filled with a non-shrink grout. Approximately 6 lintels at 4'-0" LF with 1/4" gapping. Approximately 16 lintels at 14'-0" with 1/2" gapping.	$10,000
MDF Panelboard Installation	Add 100A branch panelboard to MDF and refeed all circuits within MDF to new panel.	$15,000
Add Exterior Lighting, Perimeter	Add perimeter mounted building lighting at NE corner of building.	$11,000
Add Exterior Lighting	Add pole lighting to eliminate dark spots near west end of staff parking, near track entrance.	$20,000
CCTV upgrade	Upgrade south cameras for better low-light rendering. While area appears adequately lit, existing cameras render in black and white.	$9,000
In-Car Telephone Replacement	Replace the existing hand set with an ADA compliant telephone and automatic dialer.	$9,000
Car Door Replacement	Replace the existing, damaged, elevator car door with a stainless steel skinned door panel.	$12,000

Dehumidification Improvements	The current DOAS unit, AHU-1, does not have a cooling coil to provide dehumidification. Because of the limited size in the room, one cannot be added at the current location. Install new roof mounted DOAS unit with gas-fired heat, DX cooling. Extend roof mounted ductwork to existing FA and EA ductwork shafts on Level 3 Mechanical Rm, 326 and 303. Provide screening around unit.	$500,000
	Total 1-2 Year Project Costs:	**$819,000.00**

3 - 4 Year Priority

		Project Costs
Furniture Replacement	Furniture is recommended to be replaced with desks / tables that include student storage. Approximately 8 classrooms have desks without student storage. Media Center is recommended to include some soft seating such as collaborative benching and ottomans or other soft chairs or booths. This creates varied postures for students to work together or individually. It is also a benefit for other one on one break out groups or student teacher meetings.	DMPS
Carpet Replacement	Classroom broadloom carpet on level 2 and level 3 should be replaced with carpet tiles. Approximately 7,000 SF of carpet replacement.	$65,000
Exterior Door Refinish	Remove surface rust and repaint Entrances 1 and 3 (Double doors w/ sidelights). Remove surface rust from doors and scrape/repair wood frames at Entrances 7 and 8 (Historic Wood Frames, double doors with sidelights and arch top transoms).	$14,000
Sealant Replacement	Replace joint sealant at perimeter of aluminum windows on original building. All 4 sides of building, including wall above cafeteria. (Approx. 4000 LF)	$55,000
Roof Access Improvements	Provide guard at Roof C hatch. Provide new roof access system for Roof D. Recommend moving access point to Storage 322, with aligned openings through concrete attic lid and roof. Includes new ladder(s) from 3rd Floor to Roof (17 VLF), and potential relocation of lockers/installation of new door serving room from corridor. Also includes new roof hatch with guard and removal/infill of existing hatch opening.	$25,000
Sidewalk Repairs	Repair damaged sidewalks across the site. Approximately 49 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$12,000

Intake Repair	Repair the walls of one intake. For location, refer to civil site plan exhibit found in the appendix of this report.	$9,000
Pavement Replacement	Remove and replace 136 SY of asphalt. For locations, refer to civil site plan exhibit found in the appendix of this report.	$20,000
Heat Pump Replacement	Heat pumps are reaching the end of their useful life and will requirement replacement. Replace with a 2-speed unit to improve partial load performance and dehumidification.	$1,900,000
Cooling Tower Replacement	Cooling Tower is reaching the end of it's useful life and will need to be replaced.	$260,000
	Total 3-4 Year Project Costs:	**$2,360,000.00**

5-10 Year Priority

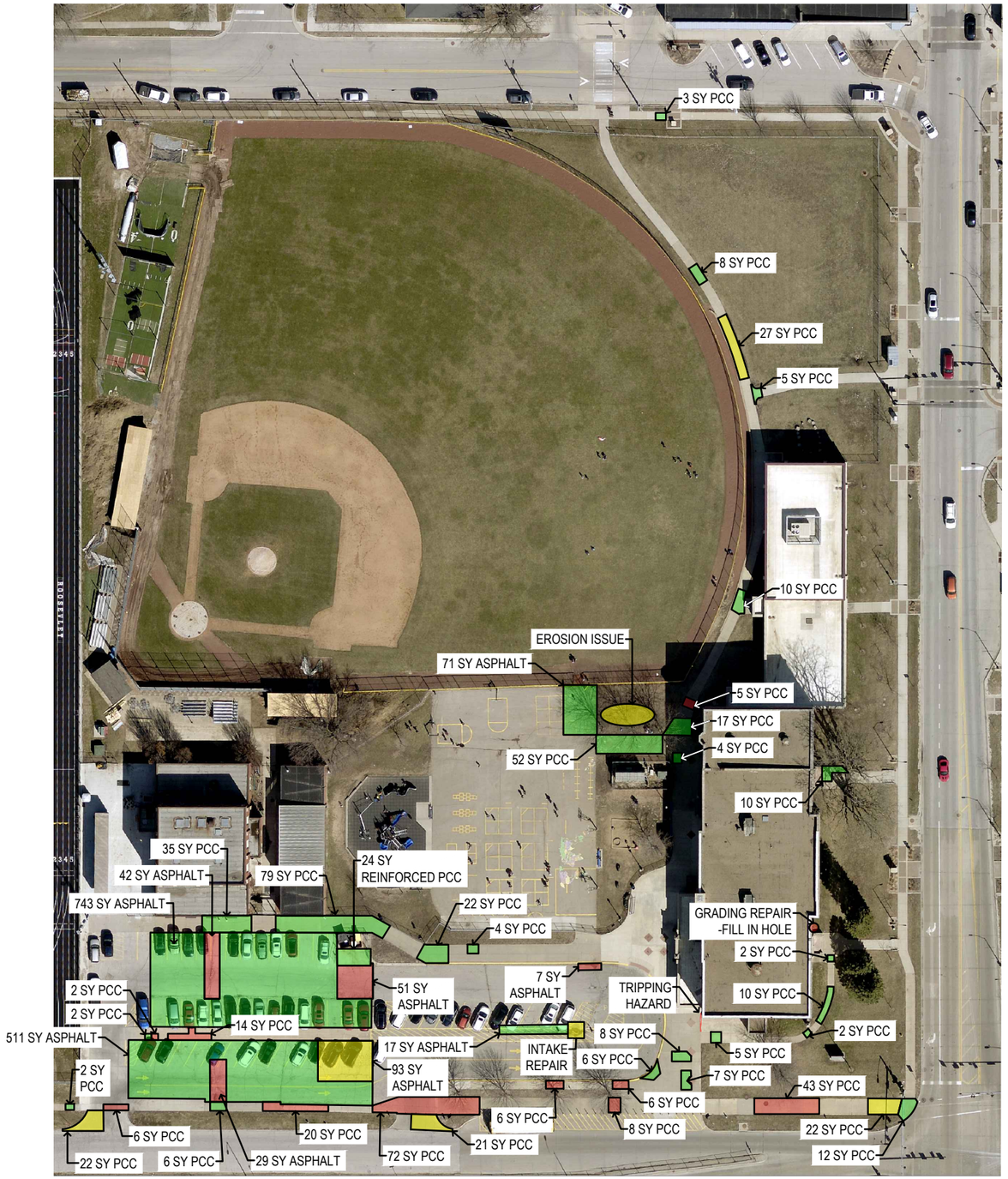
		Project Costs
Interior Refinish	Classroom and corridor walls should be repainted with minor patching as needed. Approximately 27,000 SF of painting, approximately 500 SF of minor wall patching.	$160,000
Roofing Replacement	Remove and replace modified bitumen roof (with pea gravel ballast) on Roof D (13,000 SF). Remove and replace fully adhered PVC on Roofs A-C (7,700 SF). Based on estimated remaining service life this project is recommended to be completed between 8-10 years.	$740,000
Sidewalk Repairs	Repair damaged sidewalks across the site. Approximately 305 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$70,000
Playground Pavement Replacement	Take out and restore deteriorated playground asphalt. Approximately 71 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$14,000
Pavement Replacement	Remove and replace 1271 SY of asphalt. Remove 24 SY of PCC in front of dumpsters and reinforce new pavement. For locations, refer to civil site plan exhibit found in the appendix of this report.	$230,000

Loop Water Pump Replacement	Existing heat pump loop and cooling tower loop water circulating pumps are nearing the end of their useful life and will require replacement. Complete HVAC Hydronic Study listed below before completing this work.	$140,000
Lighting Controls Installation	Recommended to add dimming controls to classrooms. Most all classrooms had lights off and lamps or string lights to supplement overhead lighting. Approximately 18 classrooms.	$190,000
	Total 5-10 Year Project Costs:	**$1,544,000.00**

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 a sink, side table, chair, and privacy door hardware.	$5,000
Teacher Storage Installation	Study to determine how best to add closed teacher storage to level 2 classrooms without losing classroom teaching space. Enclosed and open storage should be able to hold teaching curriculum supplies, station activities, books, and other necessary items to manage a classroom.	$10,000
Erosion Issue	The ground surrounding the intake is barren and appears to be washing out, a study is needed to determine if sodding, paving, or removing the tree nearby is the best solution.	$1,500
Designated Hardened Area	No designated hardened area was observed. Study to determine the feasibility of adding a designated hardened area to the building including location within the existing building, schematic design concept if deemed feasible, and preliminary project costs.	$2,500
HVAC Hydronic Study	The central plant for the water-source heat pump system seems overly complicated with multiple heat exchangers and pumps. Explore options to simply this system. This should be complicated before replacement of cooling tower or pumps.	$10,000
	Total Study Design Service Fees:	**$29,000**

APPENDIX



5+ YEAR REPLACEMENT

3-4 YEAR REPLACEMENT

1-2 YEAR REPLACEMENT

NORTH

GRAPHIC SCALE

80 0 40 80 160

bbs ARCHITECTS ENGINEERS

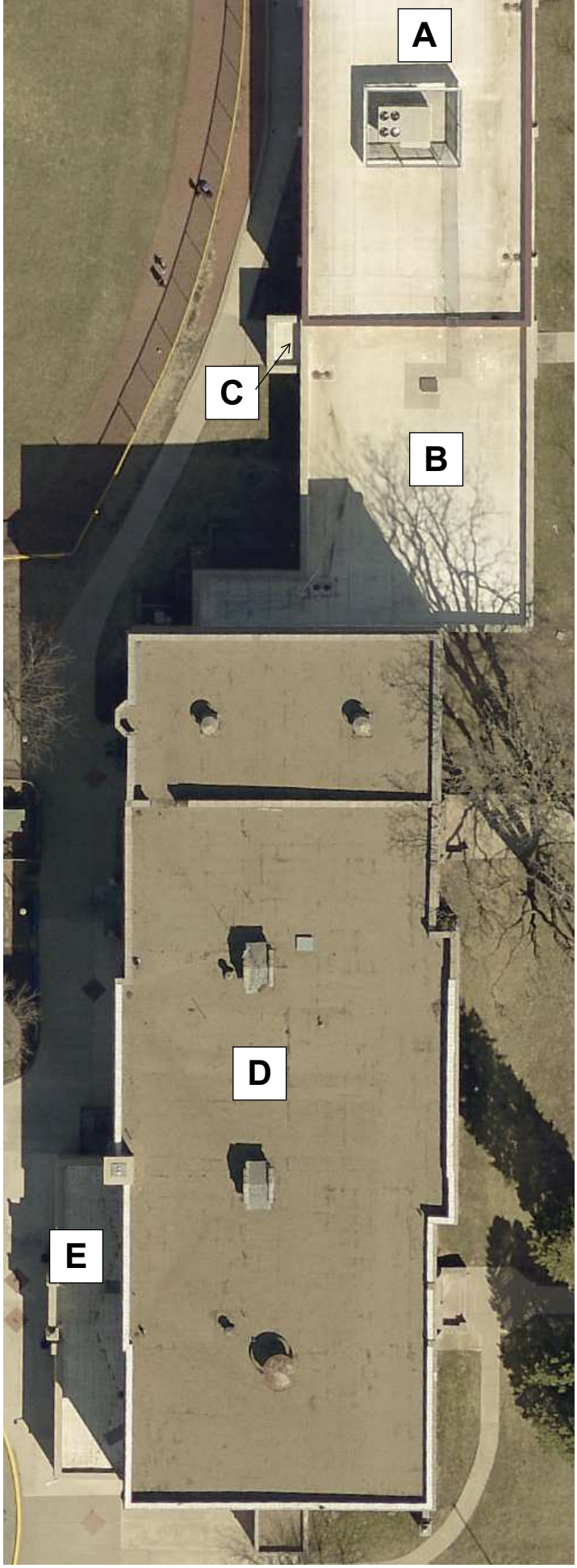
BISHOP ENGINEERING +

HUBBELL ELEMENTARY

EXHIBIT

PROJECT # 230286-14

DATE 12/26/2023



N

bbs ARCHITECTS ENGINEERS

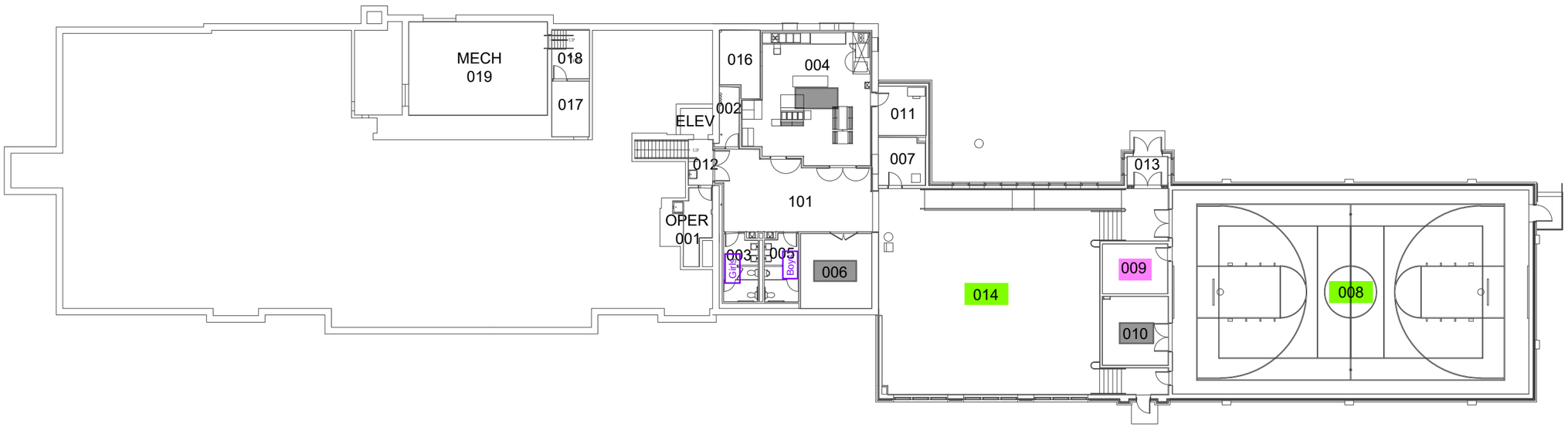
23055 - DMPS Facility Conditions Assessment
Roof Identification Image
Hubbell Elementary
1.10.2024

HUBBELL ELEMENTARY SCHOOL

800 42ND STREET
DES MOINES, IOWA 50312

LOWER LEVEL

NORTH



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

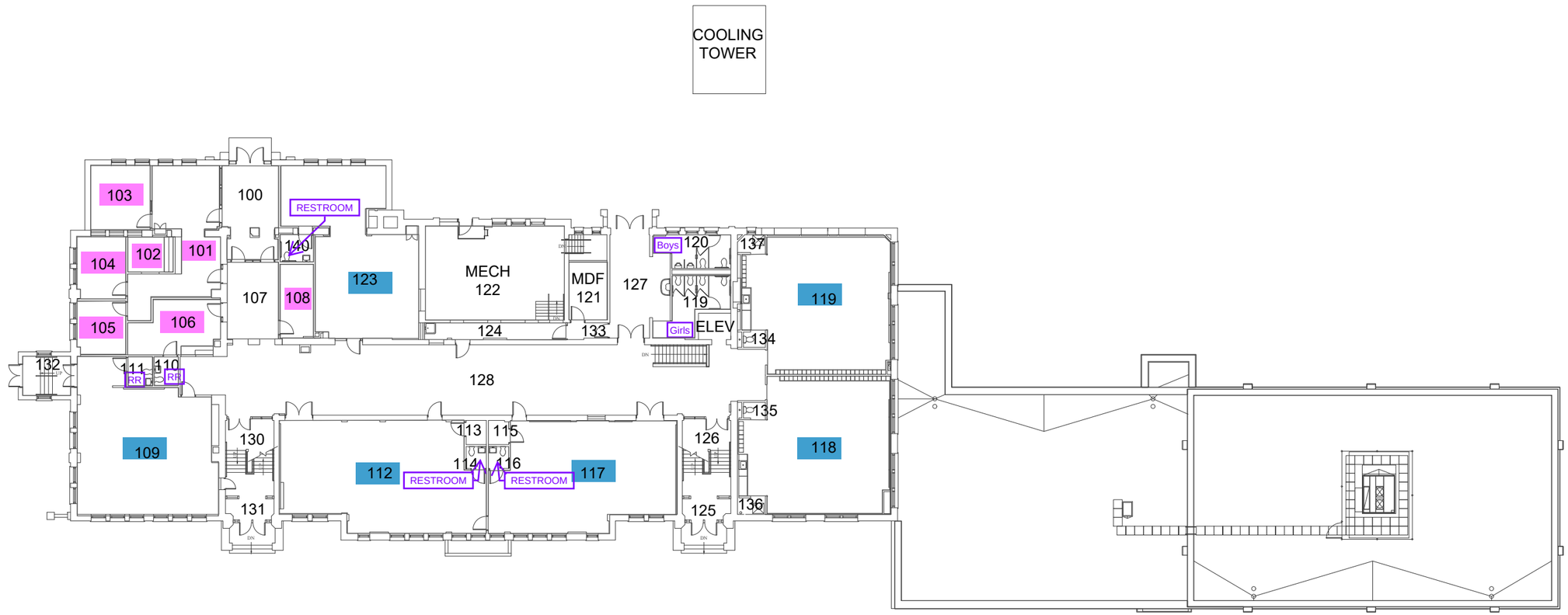
bbs
ARCHITECTS
ENGINEERS

HUBBELL ELEMENTARY SCHOOL

800 42ND STREET
DES MOINES, IOWA 50312

FIRST FLOOR

NORTH



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

bbs ARCHITECTS ENGINEERS

23055 - DMPS Facility Conditions Assessment

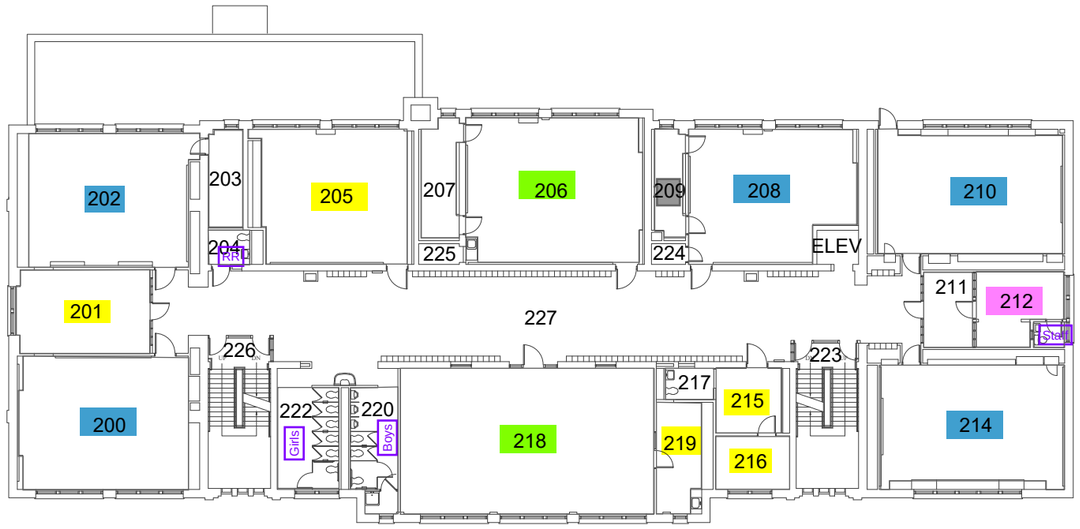
1.10.2024

HUBBELL ELEMENTARY SCHOOL

800 42ND STREET
DES MOINES, IOWA 50312

SECOND FLOOR

NORTH



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

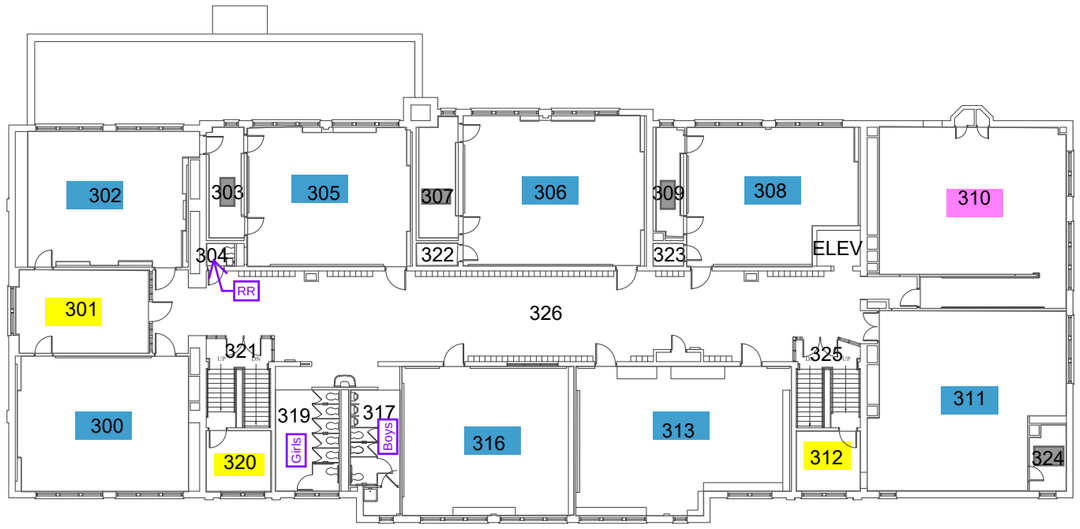
bbs ARCHITECTS ENGINEERS

HUBBELL ELEMENTARY SCHOOL

800 42ND STREET
DES MOINES, IOWA 50312

THIRD FLOOR

NORTH



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

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ARCHITECTS
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