DMPS FACILITY ASSESSMENT | PHILLIPS ELEMENTARY

10.25.2023

ARCHITECTS
ENGINEERS

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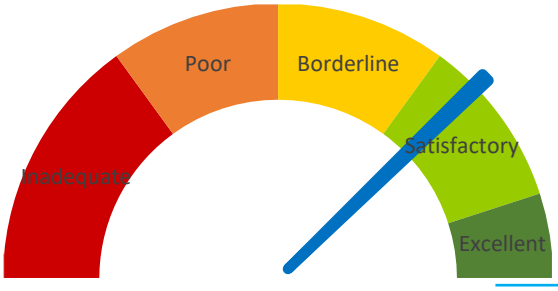


REPORT ORGANIZATION

EXECUTIVE BUILDING SUMMARY

Phillips Elementary's on-site facility conditions assessment was conducted on October 25, 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.

During the assessment at Phillips Elementary fencing was being replaced around the site and transformer. Project should ensure adequate gate access for a utility line truck in the event the transformer must be maintained or replaced. Other maintenance items that are recommended include MDP grounding, exterior sealant repairs, and increased elevator maintenance to extend the life of the doors. Phillips Elementary has beautiful original woodwork and classrooms that have been, generally, well maintained. There are areas that, as the needs have changed, modifications have been made that result in less than ideal locations for student support and teacher support spaces. Mechanically, there are many issues that need to be addressed to meet current codes and address failures that are starting to occur.

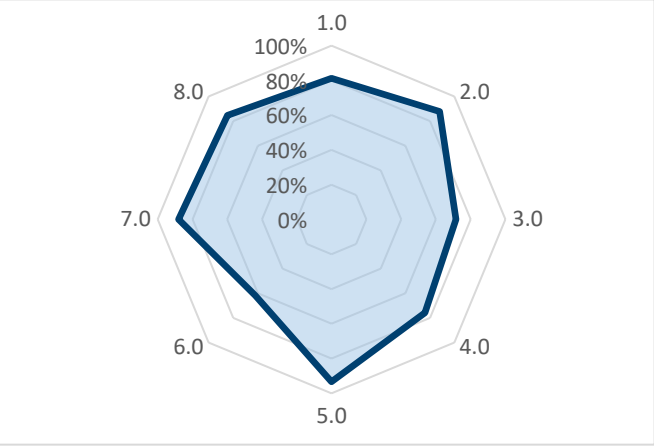
The recommended projects for Phillips Elementary to be completed in the next 1-2 years are as follows:

- Roof Access Improvements
- Lighting Protection Repairs
- Ventilation and Exhaust System Improvements
- Sanitary Sewer Replacement
- Geothermal Viability Study

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	134	2.00	330	268	81%	Satisfactory
2.0	Environment for Education	370	325	0.60	222	195	88%	Excellent
3.0	Exterior Envelope	95	68	3.00	285	204	72%	Satisfactory
4.0	School Site	100	76	1.50	150	114	76%	Satisfactory
5.0	Structural Conditions	135	126	1.30	176	164	93%	Excellent
6.0	Mechanical Systems	685	424	0.80	548	339	62%	Borderline
7.0	Electrical Systems	450	396	0.75	338	297	88%	Satisfactory
8.0	Elevator Conditions	65	55	1.00	65	55	85%	Satisfactory
Total					**2,113**	**1,636**	**77%**	**Satisfactory**

Phillips 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 Phillips Elementary scored a building health rating for77%, 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. Phillips Elementary scored within this positive range. Improvements to exterior envelope, school site, and mechanical systems as noted later in this report would help to increase the rating to Excellent.

Building Data Record

Building Name: **Phillips Elementary**

Date: **10.25.2023**

Address: **1701 Lay St**
Des Moines, IA 50317

High School Feeder System: **North High**

Building SF: **46,207 SF**

Site Acreage: **7.03 Acres**

Date(s) of Construction: **1914, 1924, 2003 (renovation)**

Date(s) of Roof Replacement: **1960, 2000, 2017**

Current/Scheduled Projects:
Replace Pavement - 2024
Playground equipment and safety surfacing - 2024
HVAC Upgrades - 2024
Acoustics in Gym - FY 2025

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

Site Items:
- [ ] Student Garden
- [ ] Loading Dock
- [x] Stormwater Detention

Energy Source:
- [x] Electric
- [x] Gas
- [ ] Geothermal
- [ ] Solar

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

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

Structure Fireproofing:
- [ ] No
- [x] Yes

Construction:
- [x] Load Bearing Masonry
- [x] Steel Frame
- [x] Concrete
- [ ] Wood
- [x] Other **Precast Concrete**

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

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	4	8	Perforated ceiling tiles provide some acoustic absorption but could be improved.
1.4	**Music room** is adequate for providing introductory music instruction.	2	4	8	General music room is adequate, storage could be improved for better circulation. Band and orchestra room has minimal storage.
1.5	**Art room** has sufficient accommodations for program.	2	3	6	Wall around sink area is showing damage. Casework is wood and showing surface damage around sink. Storage closet seems to provide inadequate storage, teacher storage for daily supplies seems inadequate.
1.6	**Library/Resource/Media Center** provides appropriate and attractive space.	1	3	3	Media center primarily set up as a classroom. Book cases that are free standing are less accessible due to other storage and furniture placement. Breakout space is present but minimally furnished.
Core Classroom					
1.7	Classroom space permits arrangements for **small group activity.**	3	4	12	All classrooms have a "rug" space, very few have an adequate single student timeout/break out space.
1.8	**Student storage space** is adequate.	2	5	10	
1.9	**Teacher storage space** is adequate.	3	3	9	Storage at teacher work stations seems to be lacking. Wooden storage tends to be difficult to access in some classrooms, according to the teachers.
1.10	Classroom **acoustical treatment** of ceiling, walls, and floors provide effective sound control.	3	4	12	All classrooms have hard ceilings, but most seem large enough to have adequate acoustics. Ground level classrooms have some acoustic issues. Classroom intervention space, 210, had very noticeable echo. Acoustic stick on panels had been added by the teacher and custodial staff. Additional acoustic panels are recommended.

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	4	16	Power strips at classroom front of the room to provide better power access. No tripping hazards were observed.
1.12	Educational **technology** supports instruction.	4	5	20	
Administration					
1.13	**Conference/Private meeting rooms** are adequate for large and small meetings.	1	2	2	One 6 - 8 person conference room present. Within that same room is shelving for curriculum materials and books, making the room seem less as a dedicated conference space including parents, administration, and staff. Minimal other meeting spaces are present for one on one meetings.
1.14	**Main office** has a check-in and waiting area.	2	4	8	Visual connection is limited to entrance vestibule and main front door from the office reception desk. See 2.11.
	TOTAL			134	

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	4	4	Corridors have limitations for accessibility on ground level. General corridor width is adequate on all upper floors.
2.2	Communication among students is enhanced by **common areas.**	1	1	1	Few group collaboration areas are present. Classrooms may have a breakout space at the front but flexible seating or group collaboration is extremely limited.
2.3	Areas for students to **interact are suitable to the age group.**	1	2	2	Most all furniture is desks and student chairs, but lacking collaborative and flexible seating.
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	4	4	Furniture generally in good condition. Staff tables and chairs are seeing wear. Student furniture in good condition.
2.6	**Color schemes**, building materials, and decor are **engaging and unify** the school character.	2	4	8	Original building has beautiful wood character. Minor wall issues may need minor patching or repair and painting.
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	All lighting is LED with full controls
2.10	**Staff dedicated spaces** include conference space, work space, and dedicated restrooms.	1	3	3	Single conference room for about 6 - 8 people that appears to be multi-purpose with teacher storage and prep space. Other meeting and staff dedicated spaces are limited.

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	3	6	Small waiting space is provided. The front desk has limited to no visibility to the front vestibule. There is visual access to the front exterior door.
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 dedicated mothers room, break room could be used if required.
Maintainability					
2.14	**Floor surfaces** are durable and in good condition.	1	4	4	Minor cracking in the terrazzo flooring throughout corridors and restrooms
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	4	4	Wet walls in upper level restrooms are gypsum board or plaster.
2.17	**Built-in casework** is designed and constructed for ease of maintenance.	1	5	5	
2.18	**Doors** are either solid core wood or hollow metal with a hollow metal frame and well maintained.	3	5	15	
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	4	8	Partitions are plastic laminate on ground level and phenolic on upper levels. In good condition but material is not the most durable.

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	3	3	Outlets in corridors are limited to drinking fountain locations. This falls generally within the recommended distances for cleaning, but may be insufficient with some equipment.
Occupant Safety					
2.22	Classroom doors are **recessed and open outward.**	4	3	12	Doors open out but are not all recessed. Doors open beyond 90 degrees and corridor widths are sufficient. Due to the age of the building and the costs to renovate this is acceptable to remain.
2.23	Door hardware (into classrooms or any occupied rooms off of corridors) include **intruder classroom locksets.**	3	3	9	Mortise locks with deadbolt is able to be locked from the corridor and classroom side. Doors were propped open with door stops or foam stoppers throughout.
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	3	6	Most all door lites are covered with cloth curtain. Curtain could be pulled aside.
2.26	**Glass** is properly located and protected to prevent accidental injury.	2	5	10	Note - wire glass at all stair enclosures and most door glazing.
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	5	25	

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	5	25	
	TOTAL			329	

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	4	8	Well maintained brick building.
Maintainability					
3.2	**Roofs** appear sound, have positive drainage, and are water tight.	3	3	9	North classroom roof is newer and in excellent condition. Remaining roofs are in good condition for its age but nearing end of expected service life.
3.3	**Roof access** is safe for all roofs.	3	2	6	Main bldg access is through roof hatch. Access consists of two fixed ladders offset 90-degrees at ceiling line. Manual ceiling access panel must be manually lifted and moved to side of opening while standing on the ladder. Lower roofs accessed only by portable ladders from ground.
3.4	Exterior **window sealant** is fully intact without cracks or gaps.	3	4	12	Generally good condition.
3.5	**Glazing** is low-e coated, insulated, and overall in good condition.	1	4	4	Window units relatively new w/ insulated glazing.
3.6	**Operable windows** are functional and safe. Operable portion of window fully seals when closed without gapping or leaking.	2	4	8	Window units relatively new and in good condition.
3.7	**Exterior doors** are of durable material requiring minimum maintenance.	2	4	8	Metal exterior doors with no visible deterioration and paint in good condition.
3.8	**Exterior walls** are of material and finish requiring little maintenance,	1	4	4	Brick walls in excellent condition. Only one location noted where joint sealant needs to be installed.
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	4	4	All doors secured. Access control provided on some doors.
	TOTAL			68	

C | Civil

ASSESSOR: Jack Gorman

4.0 Phillips Elementary

		Weight Factor	Rating	Points	Comments
4.1	**Site topography** and grading drains water away from the building and retaining walls.	1	5	5	Good drainage on site, one location (rear southeast access) had a small ponding issue in front of the entryway. The detention in southeast corner of the site has sufficient slope to drain water to the basin.
4.2	**Parking areas** are in good condition.	5	4	20	The south lot had newly poured parking areas in good condition, existing asphalt was patched and had moderate cracking but the pavement was not failing.
4.3	**Drive areas** are in good condition.	3	3	9	The north drive area contained a lot of spiderweb cracks and both accesses to the lot had considerable cracking, with the north access being the worse of the two. The drive access to the south lot was also not in good condition.
4.4	**Sufficient on-site, solid surface parking** is provided for faculty, staff, and community.	1	4	4	There were plenty of open spaces in north lot at time of visit (~half of lot unused), south lot was mostly full with a few open spaces.
4.5	**Sidewalks** around the facility are in good **condition.**	1	3	3	Stairs in front of building missing handrails, couple of panels cracked on backside of building, curbing and adjacent pavement of southwest shaded picnic area of north lot in bad condition w/ tripping hazards (old bike rack), sidewalk to west of north lot will be due for repair within 3-4 years.
4.6	**Sidewalks are located** in appropriate areas with adequate building access.	1	5	5	Site was easily accessible by sidewalk, no difficulties reaching various areas across site.
4.7	**Hard surface** playground surfaces are in good condition.	3	3	9	The reworked areas around basketball hoops were in good condition. Older areas were not in good condition with areas of sagging, cracks, and a few tripping hazards. Asphalt loop north of playground cracking but has potential to last another 10 years.
4.8	**Fencing** around the site is in good condition.	1	5	5	Perimeter fence was in good condition, snow removal in the south parking lot has pushed the fence along the north side of the lot.
4.9	**Trash enclosure** is in good condition.	1	5	5	The trash enclosure at the east end of the south parking lot appeared to be newly constructed and the masonry brick, gate, and surrounding pavement were all in good condition.
4.10	**Utilities** are in newly constructed conditions and placed in suitable locations.	1	4	4	Intakes were in good condition. The detention pond outlet was covered in rip-rap but undamaged.

		Weight Factor	Rating	Points	Comments
4.11	**Site has sufficient room** for both building and parking expansion.	1	5	5	Area south of south parking lot looks appropriate for parking expansion, plenty of space north and east of building for expansion.
4.12	Site has **onsite bus and parent pickup** up with adequate length, good separation and general good site circulation.	1	2	2	Buses use the north lot and parents use Lay St. on the west side of the building. Parent traffic creates backups onto Lay St. and conflicts with bus pickup.
	TOTAL		76		

S | Structural

ASSESSOR: Tyler Scott

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	5	5	
5.4	**Stoops** appear to be in good condition.	1	4	4	East exterior double door into boiler room 017 does not appear to have a stoop. East exterior door into cafeteria 013 does not appear to have a stoop. West main entrance door & exit door out of front desk room 001 do not have full coverage stoops for the complete swing of the doors.
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	South east elevation windows to rooms 102, 116, 117 & 202 have lintels that are rusting and staining the window frames below. Steel lintel over windows to rooms 008 & 009 shows a noticeable deflection, however, there are no visible signs of distress in the brick masonry or in the floor system.
5.9	**CMU** is in good condition.	1	5	5	
5.10	**Precast** is in good condition.	1	3	3	

S | Structural

ASSESSOR: Tyler Scott

		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	N/A	0	
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

		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			126	

MP | Mechanical & Plumbing

ASSESSOR: Corey Metzger, PE

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	4	12	This is true for classroom spaces. Offices and other areas typically have multiple spaces per zone.
6.2	**Thermostat location.** Thermostats are properly located in the space.	3	4	12	Generally appears to be true, with minor exceptions (e.g. sensor located over milk cooler).
6.3	Appropriate **amount of ventilation** are provided to each space.	5	2	10	It appears that some spaces are provided with approximately code-required air flow rates for ventilation, while others appear to be short. A few spaces are not provided with ventilation (offices off stairs).
6.4	**Ventilation** is provided during occupied hours.	5	2	10	It appears that units have control to operate during occupied hours. It was not verified that all units were actually operating while on site. A few spaces are not mechanically ventilated.
6.5	**Outdoor air intake locations** are appropriate.	4	1	4	Outdoor air intake locations are not acceptable and were not code compliant when installed. There is no separation from exhaust and two units have intakes near the fluid cooler, creating potential for chemical-laden vapors (or other contaminants of concern) to be introduced into the building.
6.6	Appropriate **levels of exhaust** are provided for areas requiring this such as restrooms, janitor's closets and locker rooms.	5	1	5	Numerous spaces requiring exhaust do not have any, primarily custodial spaces. Additionally, it appears that at least some restroom exhausts are not functional.
6.7	**Building pressurization.** The design takes into account the balance between ventilation and exhaust air	2	1	2	The design of ventilation for the building requires air to transfer from spaces served through corridors to return to ERV units. This is not code compliant and likely was not when installed, as it presents a life safety issue, allowing smoke to move from occupied areas into egress corridors.
6.8	**Major HVAC Equipment** appears to be within it's acceptable **service life.**	5	1	5	Majority of equipment is approximately twenty years old and is likely near the end of its life. Boilers may have some remaining life and equipment in addition appears to be in good condition with remaining life.
6.9	**Cooling loads** are within equipment operational capacity.	5	2	10	Generally appears to be acceptable, but was not observed on hot day. A few spaces are not conditioned or ventilated (offices off stairs).
6.10	**Heating loads** are within equipment operations capacity.	5	3	15	Generally appears to be acceptable, but was not observed on cold day. A few spaces are not conditioned or ventilated (offices off stairs).

MP | Mechanical & Plumbing

ASSESSOR: Corey Metzger, PE

		Weight Factor	Rating	Points	Comments
6.11	**Dehumidification** is provided and addressed humidity loads in incoming outside air.	3	1	3	Likely issues due to system configuration.
Plumbing Design					
6.12	**Water Supply Pressure** is adequate to allow for operation of plumbing fixtures.	5	5	25	Appears to be adequate.
6.13	Appropriate **backflow preventer** is provided at connection to city water supply.	5	5	25	Dual units in parallel in plumbing chase on ground floor.
6.14	**Domestic hot-water systems** are within equipment operational capacity.	5	4	20	Water heater appears to be in acceptable condition. May be approaching end of useful life.
6.15	Domestic **hot-water reicrulcating systems** allow for hot-water at fixtures within a reasonable amount of time.	3	1	3	System is installed, but hot water was not present after one minute on top floor at restrooms.
6.16	**Sanitary sewer systems** are sized and sloped to allow for proper drainage.	5	1	5	Multiple issues have been experienced with sanitary sewers over past several years.
6.17	Appropriately sized **grease interceptors** are provided for facilities with food service.	3	5	15	
6.18	**Roof drainage** systems are sized appropriately and overflow drainage systems are installed.	5	5	25	Generally appear to be functional with overflow scuppers.
6.19	**Restroom fixtures** are in good condition and comply with current DMPS standards.	3	5	15	Current fixtures are in good condition but do not match current DMPS standards. Current standard indicates flush valves are to be automatic with top mounted sensors. Existing flush valves are automatic with side mounted sensors.
Maintainability					
6.20	Equipment is provided with **adequate service clearance** to allow for regular maintenance	3	2	6	Many ceiling-mounted heat pumps appear difficult to access.

MP | Mechanical & Plumbing

ASSESSOR: Corey Metzger, PE

		Weight Factor	Rating	Points	Comments
6.21	AHUs and chiller are provided with **coil pull space.**	2	N/A	0	N/A
6.22	**Filter** sizes are standard and filter types are standard.	2	3	6	Generally appear to be similar throughout building for heat pumps and ERVs.
6.23	**Equipment mounting heights** are reasonable.	3	4	12	Generally appear to be reasonable. Some units are difficult to access, though not necessarily due to height of installation.
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	4	8	Where observable, valves appeared to be installed at appropriate locations.
6.26	Appropriate means are provided for **airflow and water balancing.**	3	5	15	Balancing components appear to be installed at required locations.
6.27	**Hose Bibbs** located in proximity to **outdoor condensers and condensing units**. Is cottonwood an issue at this location?	2	0	0	Rooftop unit at gym does not have hose bibb. Fluid cooler (closed-circuit cooling tower) should have reasonable access for water.
6.28	**Fall protection** is provided for equipment within 15 ft of roof edge as per OSHA standard 1910.28(b).	2	3	6	Equipment is typically not at edges of roof, but no permanent access is provided to several roof levels, requiring portable ladders to be used.
6.29	**Building devices are on DDC controls** and fully visible through Building Automation System. No pneumatic controls remain.	4	5	20	Building is on modern generation of DDC Controls. No pneumatic controls were 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, PE

		Weight Factor	Rating	Points	Comments
6.31	Building is fully **sprinklered.**	5	4	20	Yes. Several locations were identified where discharge pattern from sprinkler heads appears to be blocked and adequate coverage may not be provided (in/near restroom areas with bulkheads).
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	No mixing valves were observed. May be point of use below secured enclosures at wash fountains.
6.33	**Emergency eye-washes and tempering valves** are located where required.	5	0	0	Eyewash not observed in Boiler Rm. Recommend evaluation by 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	5	25	Switches were observed inside room at each exit.
6.35	**Refrigeration evacuation systems** are provided in rooms with chillers.	5	5	25	N/A.
6.36	**Carbon Monoxide monitoring** and alarming is provided for areas with gas-fired equipment.	5	5	25	Yes.
	TOTAL			424	

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	3	15	Fence Construction will block access from parking lot. Existing gate from playground appears too narrow for line truck.
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	4	12	Light and movable storage in front of MDP. No labeling to differentiate 480 from 208V panels.
7.4	The **MDP** appears serviceable.	4	4	16	Siemens. MFR date 2003 1200A 480/3 main
7.5	The MDP is **maintainable.**	3	5	15	
7.6	The MDP will support **future expansion.**	4	3	12	140" Mounting Space. 30" Available Space. Could easily relocate small circuits (15-20A to DP) to gain extra mounting space.
7.7	The Distribution Panel **environment is safe**, has adequate clearances and exiting.	4	4	16	150KVA XFMR. 400A DP - 120/208V Equipment stored in front. Directory label not up to date.
7.8	The Distribution Panel appears **serviceable.**	4	4	16	Missing knockout cover for one breaker space.
7.9	The Distribution Panel is **maintainable.**	4	5	20	
7.10	The Distribution Panel will support **future expansion.**	4	5	20	

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	4	8	Light and movable equipment is stored in front of panels.
7.12	Building has adequate and appropriately located, **safe exterior power** to allow for regular maintenance activities.	1	3	3	One in-use cover. One non-in-use cover by cooling tower. One NEMA 14-60R (208V 3P-4W - 60A) rcpt with no cover.
7.13	Building has adequate **exterior lighting** to promote safety and security of the property.	5	5	25	Replace HPS light on SE side with LED.
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	4	16	Fiber jumper to switches is looped around data cabling. Fed from Capitol View. Multi-Mode fiber to rooms not in use.
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	4	20	2 floor-mounted MinuteMan Power Technologies UPS units. 2000VA each
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	5	5	Fire alarm breaker is not locked.
7.19	MDF employs up-to-date **network cabling.**	2	4	8	Cat 6A, Cat 5e+ mix
7.20	MDF is connected to Intermediate Distribution Frame (IDF) closets with **fiber optic cabling.**	1	N/A	0	NA. No IDFs

E | Electrical

ASSESSOR: Rob Hedgepeth

		Weight Factor	Rating	Points	Comments
7.21	MDF has adequate **grounding busbar capacity.**	2	4	8	Aux cable tv grounding bar not connected to room's main grounding bar. Rack is grounded to TMGB. TMGB is grounded to step down transformer in room.
7.22	Building is equipped with an **addressable fire alarm system.**	5	5	25	Simplex 4100 U
7.23	Building is equipped with an **access control system.**	5	2	10	4/11=36%
7.24	Building is equipped with a **CCTV system.**	5	5	25	
7.25	Building is equipped with an **intercom system.**	4	5	20	Bogen - 2 amps/zones
7.26	Building is equipped with a **master clock system.**	4	4	16	Existing Simplex system is serviceable but does not match DMPS standard programming (Primex).
	TOTAL			381	

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	5	10	
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	3	3	There is wear on the interior finishes and entrance
8.9	**Maintenance** is adequate.	1	1	1	Minimal maintenance has been performed.
8.10	**Testing** is up to date, and all **record and logbooks** are present and filled out.	1	1	1	Annual testing is past due.
	TOTAL			55	

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

Acoustical Panel Installation	Install additional acoustic material in room 210. These could be added on the ceiling or walls to decrease the echo observed during the assessment and noted by staff in that room.
Exterior Sealant Replacement	Replace sealant in brick (one location) on east wall near parapet.
Transformer Clearance, Fence	Fencing was being replaced at the time of assessment. Project should ensure adequate gate access for a utility line truck in the event the transformer must be maintained or replaced.
Bike Rack Removal	Remove the remains of the old bike rack creating a tripping hazard. For location, refer to civil site plan exhibit found in the appendix of this report.
MDF Grounding	Auxiliary CATV grounding bar does not appear to be connected to TMGB. Install #12 grounding conductor from TMGB to CATV.
Exterior Lighting Replacement	Replace HPS fixture with LED at back of building (SE corner).
Elevator Maintenance Increase	Increase frequency to quarterly. Door guides are worn. The cost for this is approximately $2,000/yr.

1 - 2 Year Priority

		Project Costs
Roof Access Improvements	Improve roof access and safety. Provide new interior ladder with security gate to hatch in Room 215. (Approx. 15'.) Provide guard/gate assembly at perimeter of existing roof hatch and replace guardrail at adjacent parapet (approx. 5' long.) Provide wall ladder (approx. 6' h) on interior face of wall in Storage 112, with landing and ladder (approx 5' h) on exterior to provide access to Roof A via existing window. Provide ladder between Roofs A and B (approx. 6' h.) See appendix for roof identification plan.	$14,000.00
Parking Pavement Replacement	Remove and replace 112 SY of concrete drive access pavement and 49 SY of asphalt pavement. For location, refer to civil site plan exhibit found in the appendix of this report.	$25,000.00
Sidewalk Repairs	Repair damaged sidewalks across the site. Approximately 32 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$12,000.00
Curb Repair	Return damaged curbs to new condition. Approximately 40 LF of 6" curbs. For locations, refer to civil site plan exhibit found in the appendix of this report.	$7,000.00
Regrading	Restore positive drainage on the south side of the building. For location, refer to civil site plan exhibit found in the appendix of this report.	$8,000.00
Lightning Protection Repairs	Building Lightning Protection was not modified when mechanical systems were added. Mechanical vent stack extends higher than existing protection.	$8,000.00
Domestic Hot Water Circulation and Mixing Valve	Replace and modify domestic hot water recirculation to reduce time lag. Install new digital mixing valves.	$20,000.00
	Total 1-2 Year Project Costs	**$94,000.00**

3 - 4 Year Priority

		Project Costs
Casework Replacement	Replace the casework, countertop and base cabinets, and wall mounted sink on the north wall of art room 206. Wall repairs and refinishing is included in the project. Approximately 8'-6" LF of casework to be removed and replaced with approximately 13' LF of casework with a countertop mounted sink. Approximately 40 SF of wall repair and refinish with epoxy paint, or other durable materials.	$170,000.00
Roof Replacement	Replace modified bitumen roofing on Roofs B-H with new TPO roofing system. Approximately 17,500 SF. See appendix for roof identification plan. Explore possibility of eliminating ventilated attic.	$470,000.00
Parking Pavement Replacement	Remove and replace 38 SY of concrete drive access pavement and 190 SY of asphalt pavement. For location, refer to civil site plan exhibit found in the appendix of this report.	$25,000.00
Playground Pavement Replacement	Take out and restore deteriorated playground asphalt. Approximately 661 SY. For location, refer to civil site plan exhibit found in the appendix of this report.	$95,000.00
Sidewalk Repairs	Repair damaged sidewalks across the site. Approximately 63 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$14,000.00
Closed-Circuit Cooling Tower Replacement	Replace closed-circuit cooling tower or install new ground-coupled heat exchanger (geothermal) system. The geothermal system would be a separate price as noted depending on the outcome of the study described below. Confirm scope of B8892-Phillips-2024	$370,000.00
	Total 3-4 Year Project Costs	**$1,144,000.00**

5 - 10 Year Priority

		Project Costs
Entry Visibility Replacement	Increase visual connection from Office Front desk to the entrance vestibule, by adding an additional glazed opening at the front desk. This would include approximately 20 SF of CMU and brick cavity wall demo, new window, and structural supports for a window at least 4'x5'.	$11,000.00

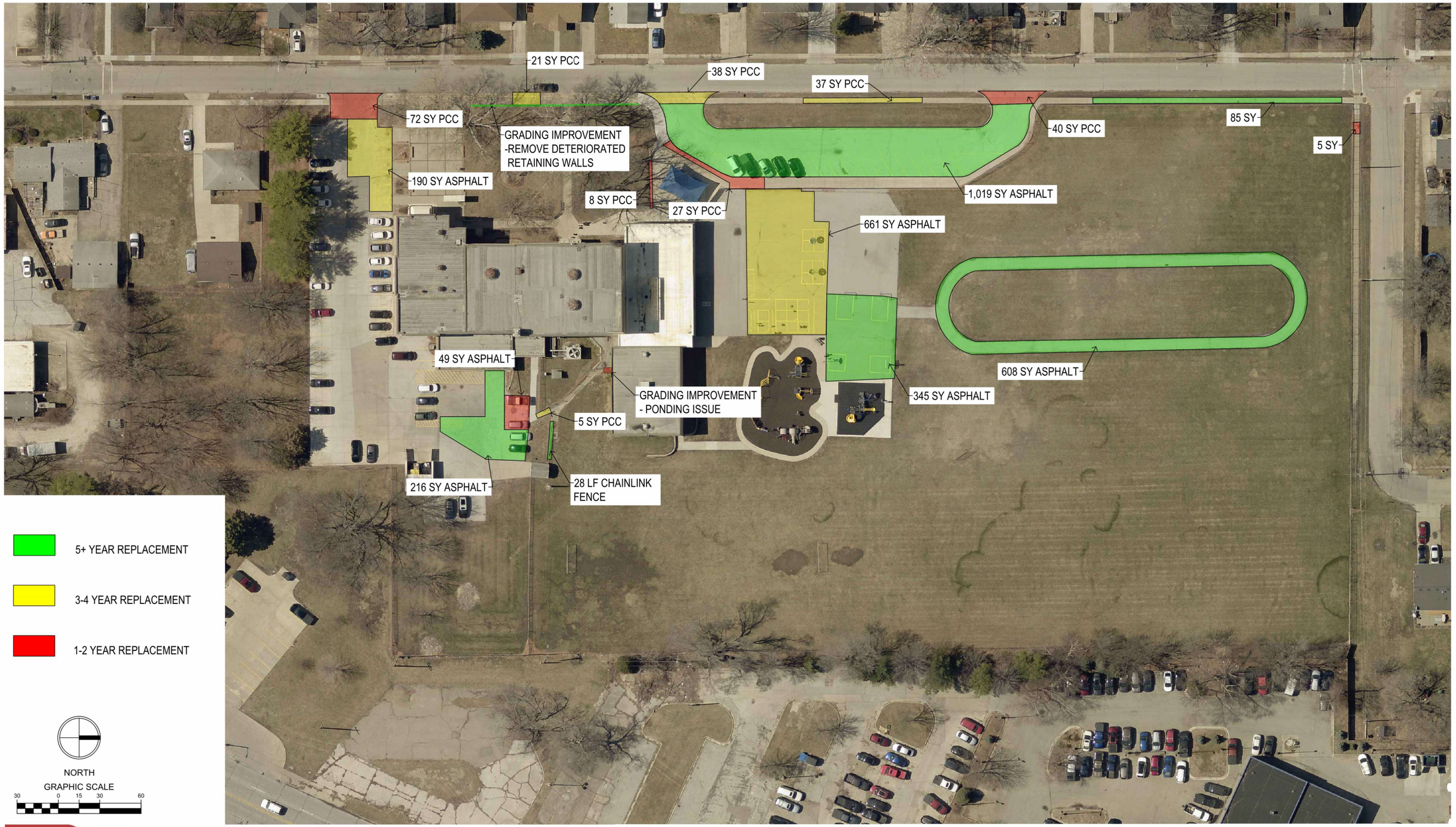
Parking Pavement Replacement	Remove and replace 1235 SY of asphalt pavement. For location, refer to civil site plan exhibit found in the appendix of this report.	$220,000.00
Playground Pavement Replacement	Take out and restore less deteriorated playground asphalt. Approximately 953 SY. For location, refer to civil site plan exhibit found in the appendix of this report.	$170,000.00
Sidewalk Repairs	Repair damaged sidewalks across the site. Approximately 85 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$20,000.00
Fencing Replacement	Remove and replace 28 LF of chain link fence. For location, refer to civil site plan exhibit found in the appendix of this report.	$9,000.00
Grading Repair	Remove deteriorated retaining walls and grade up to building. For location, refer to civil site plan exhibit found in the appendix of this report.	$13,000.00
Boiler Replacement	Replace boilers if geothermal system is not being installed. Viability of this project is dependent on the study described descirbed below. Confirm scope of B8892-Phillips--2024 HVAC Upgrades project to make sure replacement of boiler did not occur in this project.	$90,000.00
	Total 5-10 Year Project Costs	**$533,000.00**

Projects Requiring Study

		Design Service Fees
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.	$5,000.00
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

Ventilation and Exhaust System Improvements	Replace or modify ventilation and exhaust systems to address significant code concerns identified throughout the building. These concerns include using the corridor as a return path, exhaust not being provided in required areas primarily janitorial, outdoor air intakes located with no seperation from exhaust and in proximity to fluid cooler, and a few occupied spaces are provided with no ventilation or inadqequate levels of ventilation. **This study is a high priority and should be completed ahead of any mechanical replacement projects.** Anticipated Captial Investment: $2,800,000	$15,000
Geothermal Viability Review	Determine suitability of geothermal system for building HVAC systems to determine whether to repair/replace closed-circuit cooling tower. **This study is a high priority and should be completed ahead of any mechanical replacement projects.** Anticipated Captial Investment: $3,300,000	$20,000
Sanitary Sewer Replacements	Smells and clogs in the sewer piping have been noted by maintenance. Most of the sewer piping is likely original to the building (1924) and will require replacement. First step is video inspection of buried lines and visual inspection of exposed lines. If eixisting mains are in significant disrepair, a new route may need to be determined exterior to the building ILO slab cutting and pathcing of the floors in the building to replace the buried sewer mains. Anticipated Capital Investment: $1,700,000	$20,000
	Anticipated Capital Investment Costs	**$7,800,000**
	Total Study Design Service Fees	**$62,500**

APPENDIX

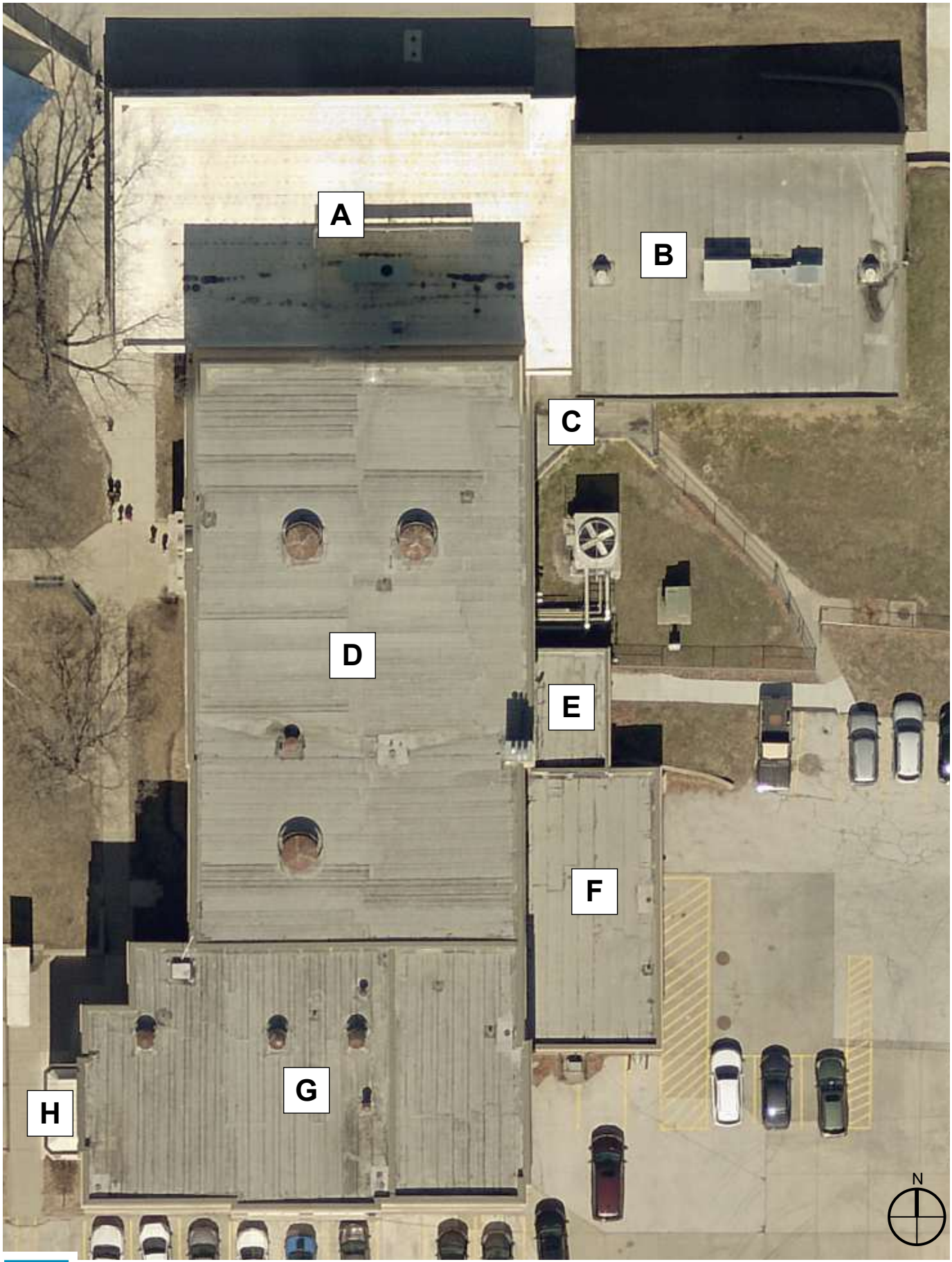


BISHOP ENGINEERING +

PHILLIPS ELEMENTARY

EXHIBIT

PROJECT # 230286-28
DATE 10-03-2023



bbs ARCHITECTS ENGINEERS

23055 - DMPS Facility Conditions Assessment
Roof Identification Image
Phillips Elementary
10.25.2023

PHILLIPS ELEMENTARY SCHOOL

1701 LAY STREET
DES MOINES, IOWA 50317

GROUND LEVEL

NORTH

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

bbs ARCHITECTS ENGINEERS

23055 - DMPS Facility Conditions Assessment

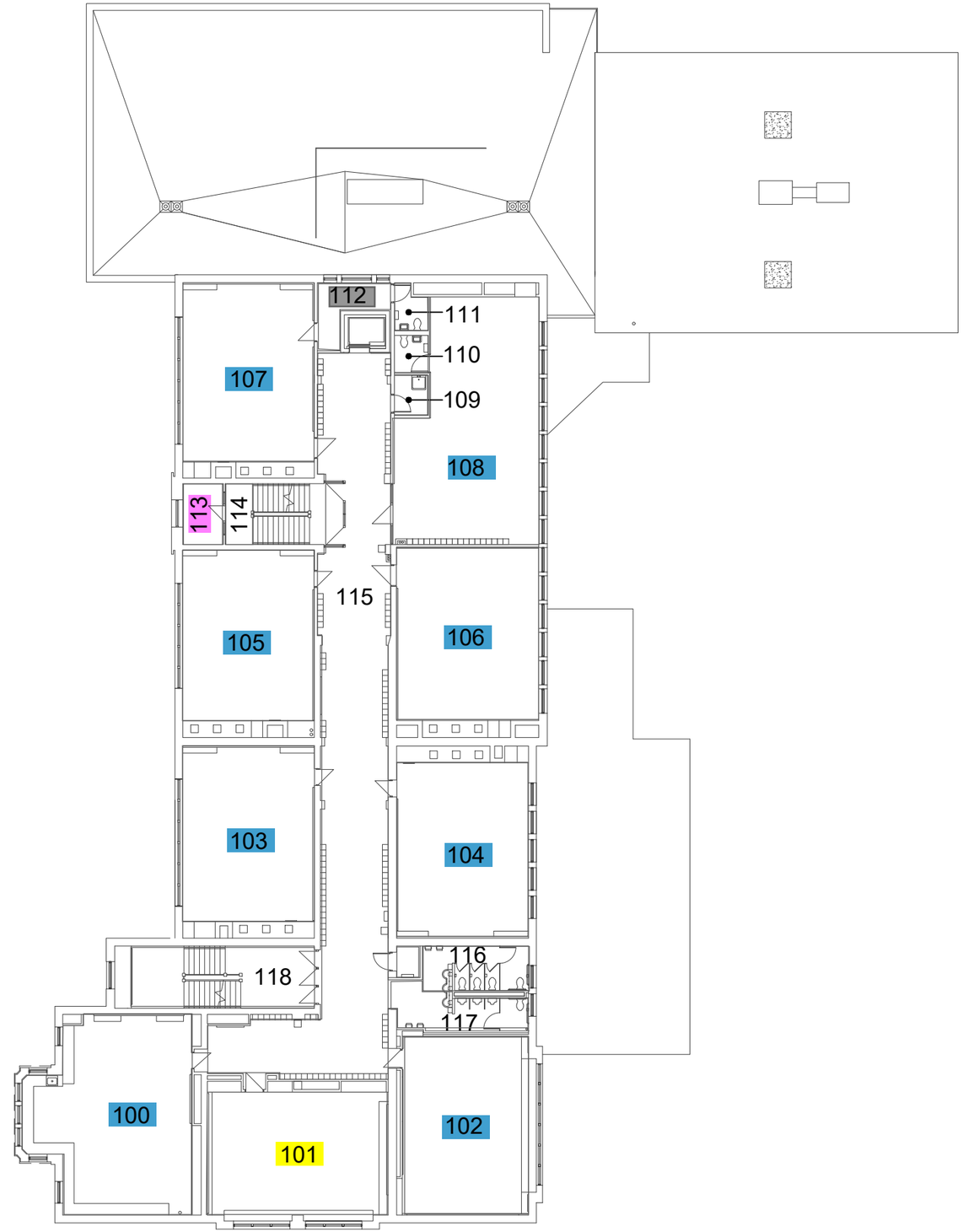
10.25.2023

PHILLIPS ELEMENTARY SCHOOL

1701 LAY STREET
DES MOINES, IOWA 50317

FIRST FLOOR

NORTH



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

bbs ARCHITECTS ENGINEERS

23055 - DMPS Facility Conditions Assessment

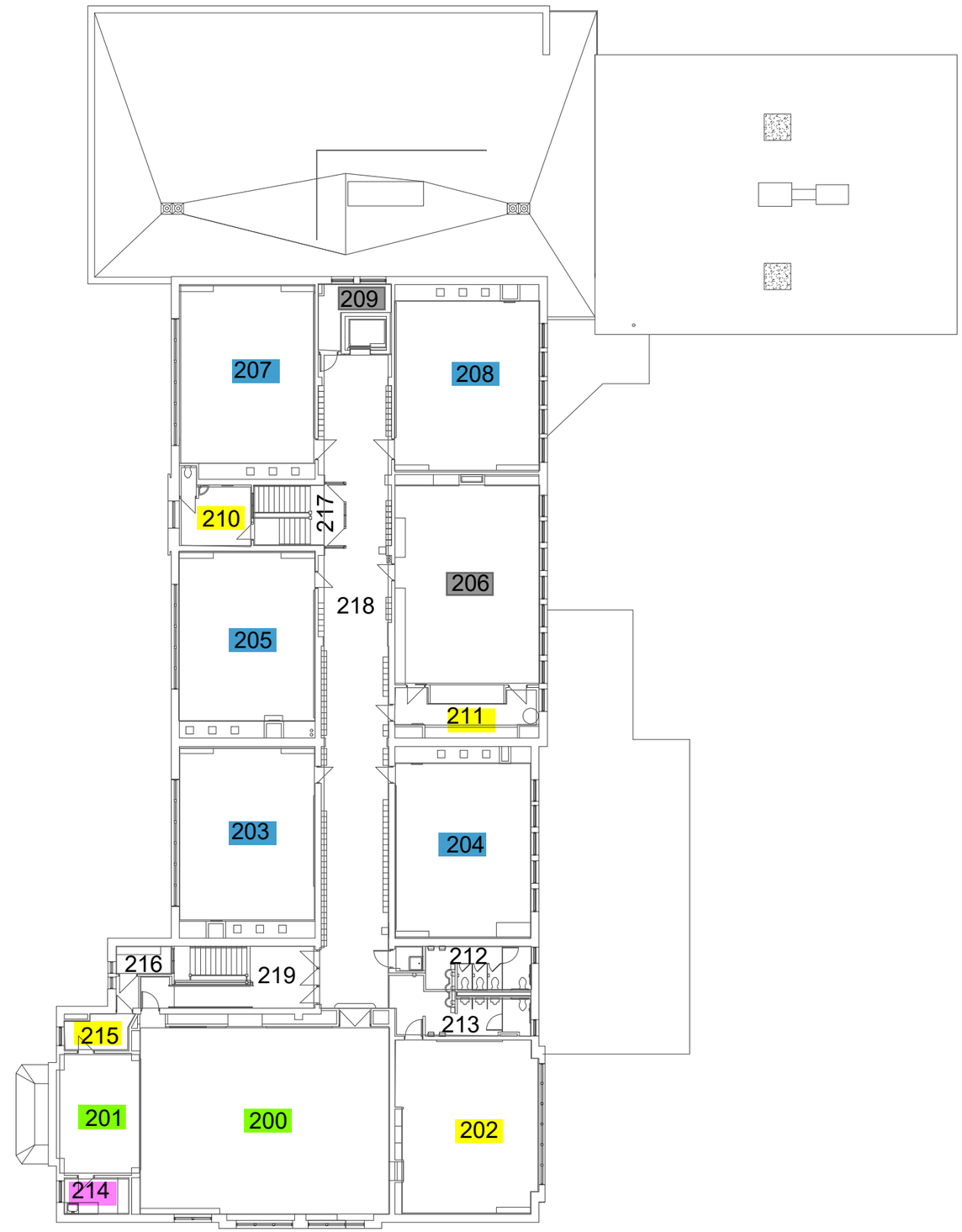
10.25.2023

PHILLIPS ELEMENTARY SCHOOL

1701 LAY STREET
DES MOINES, IOWA 50317

SECOND FLOOR

NORTH



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

bbs ARCHITECTS ENGINEERS