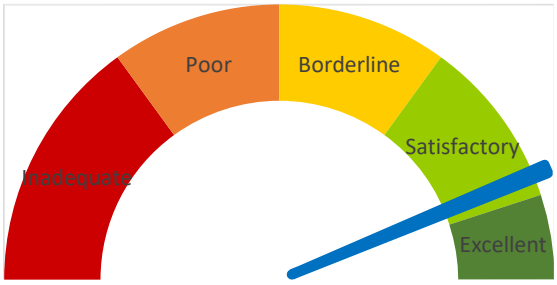
DMPS FACILITY ASSESSMENT | HOYT MIDDLE SCHOOL

02.06.2024

bbs
ARCHITECTS
ENGINEERS

219 Eighth Street
Suite 100
Des Moines, IA 50309
515.244.7167

www.bbsae.com



REPORT ORGANIZATION

EXECUTIVE BUILDING SUMMARY

Hoyt Middle School's on-site facility conditions assessment was conducted on February 6, 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 identified for Hoyt Middle School are: ceiling/ductwork repairs, electrical repairs, roof drain cover replacement, exterior door adjustments, exterior wall cleaning, hot water recirculation maintenance, and roof vent fan repair.

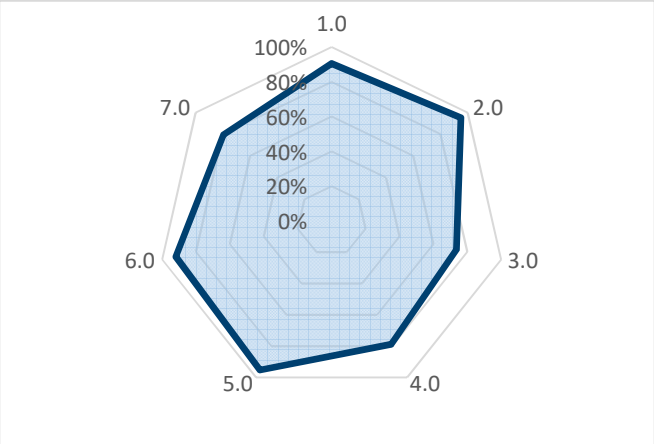
The recommended projects for Hoyt Middle School to be completed in the next 1-2 years are as follows:

- Casework repairs
- Ceiling tile replacement
- Door hardware improvements
- Gypsum board repair and painting
- Sidewalk repair
- Exterior handrail replacement
- Hot water mixing valve upgrade
- Exterior lighting

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	190	172	2.00	380	344	91%	Excellent
2.0	Environment for Education	345	328	0.60	207	197	95%	Excellent
3.0	Exterior Envelope	95	70	3.00	285	210	74%	Satisfactory
4.0	School Site	80	63	1.50	120	95	79%	Satisfactory
5.0	Structural Conditions	105	100	1.30	137	130	95%	Excellent
6.0	Mechanical Systems	670	616	0.80	536	493	92%	Excellent
7.0	Electrical Systems	455	362	0.75	341	272	80%	Satisfactory
Total					**2,006**	**1,740**	**87%**	**Satisfactory**

Hoyt Middle School
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 Hoyt Middle School scored a building health rating of 87% 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. Hoyt Middle School is within this positive range. Improvements to the Exterior Envelope and School Site categories would make the largest impact in increasing the score to Excellent.

Building Data Record

Building Name: Hoyt Middle School

Date: 2.6.2024

Address: 2700 East 42nd Street
Des Moines, IA 50317

High School Feeder System: East High

Building SF: 100,691 square feet

Site Acreage: 18.70 acres

Date(s) of Construction: 1966, 1971, 1991, 2003, 2013, 2019

Date(s) of Roof Replacement: 2000, 2014

Current/Scheduled Projects: Geothermal Upgrade
Remove fuel storage tank - 2025

Existing Building Data:

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

Site Items:

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

Energy Source:

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

Cooling:

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

Heating:

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

Structure Fireproofing:

- [x] No
- [ ] Yes

Construction:

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

Exterior Facade:

- [x] Brick
- [ ] Stucco
- [x] Metal
- [ ] Wood
- [x] Other
  Concrete, Fiber Cement Panels

Floor/Roof Structure:

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

A | Architectural, Programming

ASSESSOR: Tim Bungert

1.0 Educational Adequacy

		Weight Factor	Rating	Points	Comments
General					
1.1	**Floor materials** are appropriate for space type.	1	5	5	
Elective/Secondary Classroom					
1.2	**Gymnasium** is adequate for providing physical education programming.	3	5	15	
1.3	Gymnasium is supported by adequate **locker rooms.**	1	3	3	Locker rooms appear unused, but show significant wear on lockers and restroom fixtures.
1.4	**Cafeteria** has adequate space, furniture, and acoustics for efficient lunch use.	2	5	10	
1.5	**Vocal music room** is adequate for providing music instruction.	2	4	8	Loud noise from mechanical units near the vocal music room is not ideal for music instruction.
1.6	**Instrumental music room** is adequate for providing music instruction, practice, and lessons.	2	5	10	
1.7	**Auditorium** has sufficient arrangement, technology, and acoustics for program.	2	3	6	Auditorium is adequately sized and in good condition. Sound reverberation time is uncomfortably long. Additional acoustic absorption is necessary.
1.8	**Art room** has sufficient accommodations for program.	2	5	10	
1.9	**Science classrooms** have sufficient access to water, gas and equipment for program.	2	5	10	
1.10	**Family Consumer Science** classrooms have sufficient accommodations for program.	2	5	10	

A | Architectural, Programming

ASSESSOR: Tim Bungert

		Weight Factor	Rating	Points	Comments
1.11	**Industrial Arts** space has sufficient accommodations for program.	2	N/A	0	
1.12	**Library/Resource/Media Center** provides appropriate and attractive space.	1	N/A	0	
Core Classroom					
1.13	Classroom space permits arrangements for **small group activity.**	2	5	10	
1.14	**Student storage space** is adequate.	1	5	5	
1.15	**Teacher storage space** is adequate.	2	5	10	
1.16	Classroom **acoustical treatment** of ceiling, walls, and floors provide effective sound control.	3	3	9	Acoustic separation between classrooms in the south wing of the building is weak. Normal volume speech can be heard between rooms.
1.17	**Classroom power and data receptacles** are located to support current classroom instruction.	4	4	16	A few classrooms had long power strips stretched across the space, but power outlet quantities and locations were adequate in most rooms.
1.18	Educational **technology** supports instruction.	4	5	20	
Administration					
1.19	**Conference/Private meeting rooms** are adequate for large and small meetings.	1	5	5	
1.20	**Main office** has a check-in and waiting area.	2	5	10	
	TOTAL			172	

A | Architectural, Interior

ASSESSOR: Tim Bungert

2.0 Environment for Education

Design

		Weight Factor	Rating	Points	Comments
2.1	**Traffic flow** is aided by appropriate foyers and corridors.	2	5	10	
2.2	Communication among students is enhanced by **common areas.**	2	5	10	
2.3	Areas for students to **interact are suitable to the age group.**	2	5	10	
2.4	Large group areas are designed for effective **management of students.**	2	4	8	Secondary cafeteria space requires additional staff supervision when the operable partition is closed.
2.5	**Furniture Systems** are in good or like new condition.	1	5	5	
2.6	**Color schemes**, building materials, and decor are **engaging and unify** the school character.	2	5	10	
2.7	Windows and skylights provide access to **adequately controlled daylight** for regularly occupied spaces.	3	5	15	One operable skylight damper in room 1305 does not fully open. Rooms 1115 and 1125 are in need of shades or other daylight control on the windows above exterior doors.
2.8	Windows provide access to **quality views** (to exterior, courtyards, artwork etc.) for regularly occupied spaces.	3	5	15	
2.9	**Lighting has proper controls** to provide the required light levels for various teaching and learning needs.	2	5	10	
2.10	**Staff dedicated spaces** include conference space, work space, and dedicated restrooms.	1	5	5	

A | Architectural, Interior

ASSESSOR: Tim Bungert

		Weight Factor	Rating	Points	Comments
2.11	**Main office** is visually connected to the entry and is welcoming to students, staff, and guests.	3	5	15	
2.12	**Break room** is adequately sized and furnished for proper use.	1	4	4	Primary staff break room is sufficiently sized and furnished. The makeshift kitchenette in the main office area lacks adequate casework/countertop, sink, and refrigerator.
2.13	**Mother's room** is a separate designated space properly furnished.	1	0	0	No mother's room observed.
Maintainability					
2.14	**Floor surfaces** are durable and in good condition.	1	4	4	Damage noted to VCT flooring in some classrooms.
2.15	**Ceilings** throughout the building – including services areas – are easily cleaned and resistant to stain.	1	5	5	
2.16	**Walls** throughout the building – including services areas – are easily cleaned and resistant to stain.	1	5	5	
2.17	**Built-in casework** is designed and constructed for ease of maintenance.	1	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	5	10	

A | Architectural, Interior

ASSESSOR: Tim Bungert

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

A | Architectural, Interior

ASSESSOR: Tim Bungert

		Weight Factor	Rating	Points	Comments
2.31	At least **two independent exits** from any point in the building	5	5	25	
2.32	**Emergency lighting** is provided throughout the building.	5	5	25	
	TOTAL			328	

A | Architectural , Exterior

ASSESSOR: Matthew Gaul

3.0 Exterior Envelope

		Weight Factor	Rating	Points	Comments
Design					
3.1	Overall **design is aesthetically pleasing** and appropriate for the age of students.	2	4	8	The brick at the older parts of the building is dull and desaturated. The fiber cement panels at the entry are a pleasing design, but are faded, graffiti-ed, and damaged.
Maintainability					
3.2	**Roofs** appear sound, have positive drainage, and are water tight.	3	4	12	Reroofing required in 5-10 years.
3.3	**Roof access** is safe for all roofs.	3	2	6	Roof was only accessible via roof hatch at Brubaker at time of assessment. There is an inaccessible door north of the gymnasium that may lead to an interior ladder. Multiple roofs either lacked ladders for access or were only accessible via rungs embedded in masonry without side rails.
3.4	Exterior **window sealant** is fully intact without cracks or gaps.	3	4	12	Some locations of replacement needed.
3.5	**Glazing** is low-e coated, insulated, and overall in good condition.	1	3	3	Low-e coating cannot be determined, but windows are tinted. A few lites of exterior glazing are internally condensing, indicating their seals are broken.
3.6	**Operable windows** are functional and safe. Operable portion of window fully seals when closed without gapping or leaking.	2	5	10	
3.7	**Exterior doors** are of durable material requiring minimum maintenance.	2	5	10	
3.8	**Exterior walls** are of material and finish requiring little maintenance,	1	3	3	Fiber cement panels at entry are not durable enough for user group. Exterior sealant replacement.
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	1	1	08 doors do not latch 06 doors have card readers 07 doors have lock sets 20 doors do not have exterior locks 00 doors lack signage; 02 doors at courtyard do not have position sensors
	TOTAL			70	

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	One erosion issue under outlet pipe in southeastern detention pond, a few locations where erosion has washed away soil and exposed the stoop/building foundation. Recommend to add soil and sod over these areas as a maintenance project
4.2	**Parking areas** are in good condition.	5	4	20	The west parking lot appears new and in good condition. The east parking asphalt pavement is cracking and sagging throughout and needs replacement.
4.3	**Drive areas** are in good condition.	3	4	12	Similar to the parking pavement, the western drive is in good condition and the eastern drive needs replacement.
4.4	**Sufficient on-site, solid surface parking** is provided for faculty, staff, and community.	1	5	5	DMPS states staff parking is good and that event parking is good as well.
4.5	**Sidewalks** around the facility are in good **condition.**	1	4	4	Patches along the eastern side and the sidewalk through the west lot drive access need replacement, but most of the sidewalk on site was in good condition.
4.6	**Sidewalks are located** in appropriate areas with adequate building access.	1	3	3	A couple building doors are without sidewalk access, site was easy to navigate by sidewalk otherwise
4.7	**Hard surface** playground surfaces are in good condition.	3	N/A	0	No hard playground surfaces on site.
4.8	**Fencing** around the site is in good condition.	1	5	5	Fences appeared in good condition.
4.9	**Trash enclosure** is in good condition.	1	N/A	0	The dumpsters are out by the loading dock area.
4.10	**Utilities** are in newly constructed conditions and placed in suitable locations.	1	4	4	One intake repair in the east drive, no other issues observed.

ASSESSOR: Jack Gorman / Joel Jackson

		Weight Factor	Rating	Points	Comments
4.11	**Site has sufficient room** for both building and parking expansion.	1	3	3	There is some space near the center of the site for building or parking expansion but there would be size restrictions for either expansion.
4.12	Site has **onsite bus and parent pickup** up with adequate length, good separation and general good site circulation.	1	3	3	Buses use the east drive and parents use both the east and west drive for drop off. DMPS states there are many conflicts between parents on the eastern side of the site.
	TOTAL		63		

S | Structural

ASSESSOR: Erik Raker

5.0 Structural Conditions

		Weight Factor	Rating	Points	Comments
Foundations					
5.1	**Foundations** appear to be in good condition with no visible cracks.	1	5	5	
5.2	There does not appear to be any **foundation settlement.**	2	5	10	
5.3	**Basement walls** do not appear to have any cracks.	1	N/A	0	
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	5	5	
5.9	**CMU** is in good condition.	1	5	5	
5.10	**Precast** is in good condition.	1	5	5	

S | Structural

ASSESSOR: Erik Raker

		Weight Factor	Rating	Points	Comments
Interior Walls					
5.11	**Interior walls** appear to be in good condition.	1	5	5	
Floor Framing (Elevated)					
5.12	**Floor framing** appears to be in good condition.	3	N/A	0	
5.13	Floor framing appears to meet the **code requirements.**	3	N/A	0	
Roof Framing					
5.14	**Roof framing** appears to be in good condition.	3	5	15	
Miscellaneous					
5.15	**Retaining walls** appear to be in good condition.	1	N/A	0	
5.16	**Canopies** appear to be in good condition.	1	5	5	
5.17	**Loading dock concrete** appears to be in good condition.	2	5	10	
5.18	**Mechanical screening** appears to be in good condition.	2	5	10	
5.19	**Stairs** appear to be in good condition.	1	N/A	0	
5.20	**Stair railings** appear to be in good condition.	1	N/A	0	

S | Structural

ASSESSOR: Erik Raker

		Weight Factor	Rating	Points	Comments
5.21	**Tunnels** appear to be in good condition without cracks.	1	N/A	0	
5.22	There is a **designated hardened area** in the building.	1	0	0	No designated hardened area observed.
5.23	The hardened area appears consistent with the **ICC 2018 code.**	1	N/A	0	
	TOTAL		100		

MP | Mechanical & Plumbing

ASSESSOR: Chuck Heldenbrand

6.0 Mechanical Systems

HVAC Design

		Weight Factor	Rating	Points	Comments
6.1	**Zone Control.** Thermostats are provided in each space for individual zone control of space temperatures.	3	5	15	
6.2	**Thermostat location.** Thermostats are properly located in the space.	3	5	15	
6.3	Appropriate **amount of ventilation** are provided to each space.	5	4	20	Generally appears to be true, however, no airflow stations at AHUs.
6.4	**Ventilation** is provided during occupied hours.	5	5	25	
6.5	**Outdoor air intake locations** are appropriate.	4	5	20	
6.6	Appropriate **levels of exhaust** are provided for areas requiring this such as restrooms, janitor's closets and locker rooms.	5	5	25	
6.7	**Building pressurization.** The design takes into account the balance between ventilation and exhaust air	2	4	8	AHUs without airflow measuring stations.
6.8	**Major HVAC Equipment** appears to be within it's acceptable **service life.**	5	4	20	All equipment is 10 years old or less and in good to excellent condition.
6.9	**Cooling loads** are within equipment operational capacity.	5	5	25	
6.10	**Heating loads** are within equipment operations capacity.	5	4	20	DMPS noted issues with boilers and hot water piping.

MP | Mechanical & Plumbing

ASSESSOR: Chuck Heldenbrand

		Weight Factor	Rating	Points	Comments
6.11	**Dehumidification** is provided and addressed humidity loads in incoming outside air.	3	4	12	AHUS include DX or chilled water cooling which provided indirect dehumidification. However, no dedicated dehumidification equipment or sequence of control is appears to be implemented.
Plumbing Design					
6.12	**Water Supply Pressure** is adequate to allow for operation of plumbing fixtures.	5	5	25	
6.13	Appropriate **backflow preventer** is provided at connection to city water supply.	5	4	20	
6.14	**Domestic hot-water systems** are within equipment operational capacity.	5	5	25	
6.15	Domestic **hot-water recirculating systems** allow for hot-water at fixtures within a reasonable amount of time.	3	4	12	Appears to be operational when tested at hand washing stations but may have issues per discussion with DMPS.
6.16	**Sanitary sewer systems** are sized and sloped to allow for proper drainage.	5	5	25	
6.17	Appropriately sized **grease interceptors** are provided for facilities with food service.	3	5	15	
6.18	**Roof drainage** systems are sized appropriately and overflow drainage systems are installed.	5	5	25	
6.19	**Restroom fixtures** are in good condition and comply with current DMPS standards.	3	5	15	
Maintainability					
6.20	Equipment is provided with **adequate service clearance** to allow for regular maintenance	3	5	15	

MP | Mechanical & Plumbing

ASSESSOR: Chuck Heldenbrand

		Weight Factor	Rating	Points	Comments
6.21	AHUs and chiller are provided with **coil pull space.**	2	5	10	
6.22	**Filter** sizes are standard and filter types are standard.	2	4	8	Varies with equipment type.
6.23	**Equipment mounting heights** are reasonable.	3	5	15	
6.24	**Floor surfaces** throughout the mechanical room are non-slip and are dry.	2	5	10	
6.25	**Isolation valves** are located in the plumbing and hydronic systems to allow for isolation of only portions of the system for servicing.	2	5	10	
6.26	Appropriate means are provided for **airflow and water balancing.**	3	5	15	
6.27	**Hose Bibbs** located in proximity to **outdoor condensers and condensing units**. Is cottonwood an issue at this location?	2	3	6	Several pieces of roof mounted equipment require cleaning. Wall hydrants are available at grade. Building is 1-story, though a few of the stories are taller in height. Recommend roof hydrant to clean rooftop equipment.
6.28	**Fall protection** is provided for equipment within 15 ft of roof edge as per OSHA standard 1910.28(b).	2	5	10	
6.29	**Building devices are on DDC controls** and fully visible through Building Automation System. No pneumatic controls remain.	4	5	20	
Occupant Safety					
6.30	**Backflow prevention** is provided at all **cross-connections** to non-potable water.	5	5	25	

MP | Mechanical & Plumbing

ASSESSOR: Chuck Heldenbrand

		Weight Factor	Rating	Points	Comments
6.31	Building is fully **sprinklered.**	5	5	25	
6.32	**Domestic hot-water temperature** at lavatories used by students or staff is provided with a thermostatic mixing valve and adjusted properly.	5	5	25	
6.33	**Emergency eye-washes and tempering valves** are located where required.	5	1	5	EEW located in Kitchen but no EEW located in mechanical room. Recommend evaluation with an occupational safety and health professional to determine necessity of eye wash(es) for facility mechanical spaces.
6.34	**Emergency boiler stop switches** are located at exits from boiler rooms.	5	5	25	
6.35	**Refrigeration evacuation systems** are provided in rooms with chillers.	5	N/A	0	
6.36	**Carbon Monoxide monitoring** and alarming is provided for areas with gas-fired equipment.	5	5	25	
	TOTAL			616	

E | Electrical

ASSESSOR: Rob Hedgepeth

7.0 Electrical Systems

Electrical Design

		Weight Factor	Rating	Points	Comments
7.1	**Transformer location** is easily accessible by utility line truck to allow for rapid transformer replacement in the event of an issue.	5	5	25	
7.2	**Transformer** has adequate clearance from non-combustible building components, paths of egress, etc. 10' clear working area in front of doors.	5	4	20	Mech room window is close to transformer.
7.3	**The MDP environment** is safe, has adequate clearances and exiting.	3	4	12	Light equipment stored in service area.
7.4	The **MDP** appears serviceable.	4	4	16	2013 - 208Y/120V - 3000A Siemens (10-25 year old equipment)
7.5	The MDP is **maintainable.**	3	5	15	
7.6	The MDP will support **future expansion.**	4	4	16	125% spare capacity.
7.7	The Distribution Panel **environment is safe**, has adequate clearances and exiting.	4	4	16	Light equipment stored in service area.
7.8	The Distribution Panel appears **serviceable.**	4	4	16	(10-25 year old equipment)
7.9	The Distribution Panel is **maintainable.**	4	5	20	
7.10	The Distribution Panel will support **future expansion.**	4	4	16	125% spare capacity.

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	5	10	
7.12	Building has adequate and appropriately located, **safe exterior power** to allow for regular maintenance activities.	1	3	3	Somewhat adequate power with broken waterproof covers. In-use covers should be considered.
7.13	Building has adequate **exterior lighting** to promote safety and security of the property.	5	4	20	Dark at inset at south corner, east side.
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	MDF door does not have a card reader.
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	0	0	UPS in room, but no loads are plugged into it. this should be resolved when district updates network switches and brings new UPS units on-line.
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	Existing panel is an older GE panel. All 42 circuits appear to be in use. No spares.
7.19	MDF employs up-to-date **network cabling.**	2	4	8	Cat 5e/6A
7.20	MDF is connected to Intermediate Distribution Frame (IDF) closets with **fiber optic cabling.**	1	5	5	

E | Electrical

ASSESSOR: Rob Hedgepeth

		Weight Factor	Rating	Points	Comments
7.21	MDF has adequate **grounding busbar capacity.**	2	2	4	Ground bus is near capacity.
7.22	Building is equipped with an **addressable fire alarm system.**	5	5	25	Simplex 4100u
7.23	Building is equipped with an **access control system.**	5	1	5	5/38=13%
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 Intercom system supports Brubaker Elementary and Hoyt.
7.26	Building is equipped with a **master clock system.**	4	5	20	Primex
	TOTAL			362	

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

Ceiling and Ductwork Repair	Repair supports on 60 ft of exposed ductwork in rooms 1445 and 1450 that are improperly attached to the ceiling. Repair 120 SF of acoustic ceiling after remounting ductwork.
Light Fixture Repairs	Repair light fixture with loose lens in room 1305. Repair emergency light fixture with constant clicking noise in room 1660.
Electrical Power Outlet Repair	Repair power outlets in room 1220 to provide adequate convenience power in lieu of long powerstrips plugged in to high-mounted outlet that creates a tripping hazard.
Restroom Accessories	Install missing mirror(s) and soap dispensers in restroom 1466.
Skylight Repair	Repair damper motor or switch control for 1 skylight in room 1350.
Roof Drain Cover Replacement	Replace 11 missing or mismatched roof drain covers: 5 at roof area K; 4 at roof area F; and 2 at roof area H.
Exterior Door Adjustment	Adjust 12 exterior doors so that they latch from any closing position at the following locations: 1 at main entry, 1 at room 1115; 1 at room 1125; 1 at room 1240; 1 near room 1730; 1 near room 1610; 1 at room 1805; and 1 at room 1545. Also, remove hold-opens at the following exterior doors: 4 doors of entry near 1805; 2 in 1805; 1 near 1807.

Exterior Wall Cleaning	Clean approx. 10 SF of brick below gas vent E of room 1677.	
Erosion Repair	Add soil around eroded areas and cover with sod to prevent anymore soil from washing out. For location, refer to civil site plan exhibit found in the appendix of this report.	
Hot Water Recirculation Maintenance	Verify that hot water recirculation piping and pump are functioning. Check for closed shutoff valves, balancing valves, and pump capacity to be sure it is working to maximum capability. Hot water was found on site visit but DMPS Maintenance has reported issues.	
Roof Vent Fan Repair	One powered roof vent fan is very noisy and needs a new belt and idler pulley to repair. Consider changing to a direct drive fan.	

1 - 2 Year Priority

		Project Costs
Casework Repairs	Repair finish damage on 375 SF of wood veneer casework in rooms1420, 1430, 1435, 1445, 1450, and 1525. Replace 6 LF of countertop with 1 sink in room 1525. Repair 6 LF of plastic laminate edge banding at counters in rooms 1213, 1315, and 1320.	$8,000
Ceiling Tile Replacement	Replace approximately 35 damaged or missing acoustic ceiling tiles in rooms 1110, 1240, 1412, 1440, 1515, 1520, 1530, 1649, and the corridor outside room 1090.	$13,000
Door Hardware Improvements	Add 2 kickplates to double door in corridor east of room 1530. Replace damaged emergency egress hardware at double door in corridor southwest of room 1650.	$5,000
Gypsum Board Repair and Painting	Repair 20 SF total of gypsum board wall damage in rooms 1367, 1404, and 1445. Paint 100 SF total of interior walls in rooms 1235, 1367, 1404, 1420, and 1445. Install 4 total corner guards at entrances to restrooms 1367 and 1368.	$5,000
Sidewalk Repair	Repair damaged sidewalks across the site. Approximately 52 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$12,000

Handrail Replacement	Replace the damaged handrails to improve access into the building. For location, refer to civil site plan exhibit found in the appendix of this report.	$8,000
Exterior Lighting	Add perimeter exterior light at Inset on East side, south end.	$7,000
Lightning Protection System	Install new lightning protection system and interface with existing lightning protection on Brubaker Elementary.	$50,000
Piping Insulation Replacement	Replace closed-cell insulation on roof mounted refrigeration piping. Use UV resistant type insulation.	$25,000
	Total 1-2 Year Project Costs:	**$133,000.00**

3 - 4 Year Priority

		Project Costs
Paint Doors and Frames	Repaint 2 double hollow metal frames, 1 single hollow metal frame, and 5 door panels in gymnasium 1650.	$8,000
Door Replacement	Replace 2 damaged single wood door panels with painted hollow metal door panels at room 1623. Hollow metal frames may be reused.	$20,000
Conference Room Table Power	Replace or modify conference table in room 1105 to include convenience power outlets in the table in lieu of the long powerstrips currently in use that create tripping hazards.	DMPS
Flooring Replacement	Replace approximately 500 SF of VCT tile in rooms 1115, 1120, 1125, 1235, 1330, 1340, 1360, 1365, 1405, and 1505. Replace 500 SF of heavily stained carpet tile in room 1640.	$12,000

Exterior Repainting	This includes concrete soffits and concrete wall panels above doors at the following locations: 20 SF NE of room 1090; 20 SF NW of room 1090; 50 SF NE of room 1705; 30 SF NW of room 1750; 250 SF SE of room 1805; 25 SF SE of room 1675; 25 SF E of room 1545, as well as 5' tall band at top of wall around gymnasium, approx. 2,000 SF. Approx. total: 2,420 SF. Also patch spalling NW of room 1090; 1 SF by 1" deep.	$14,000
Exterior Glazing Replacement	Replace insulated glazing unit SE of room 1805; approx. 9 SF.	$7,000
Pavement Replacement	Remove and replace 1140 SY of asphalt and 12 SY of PCC. For locations, refer to civil site plan exhibit found in the appendix of this report.	$170,000
Grading Repair	Install erosion mat or concrete beneath outlet pipe to prevent further erosion. For location, refer to civil site plan exhibit found in the appendix of this report.	$8,000
Intake Repair	Repair the walls of the parking lot intake. For location, refer to civil site plan exhibit found in the appendix of this report.	$9,000
	Total 3-4 Year Project Costs:	**$248,000.00**

5 - 10 Year Priority

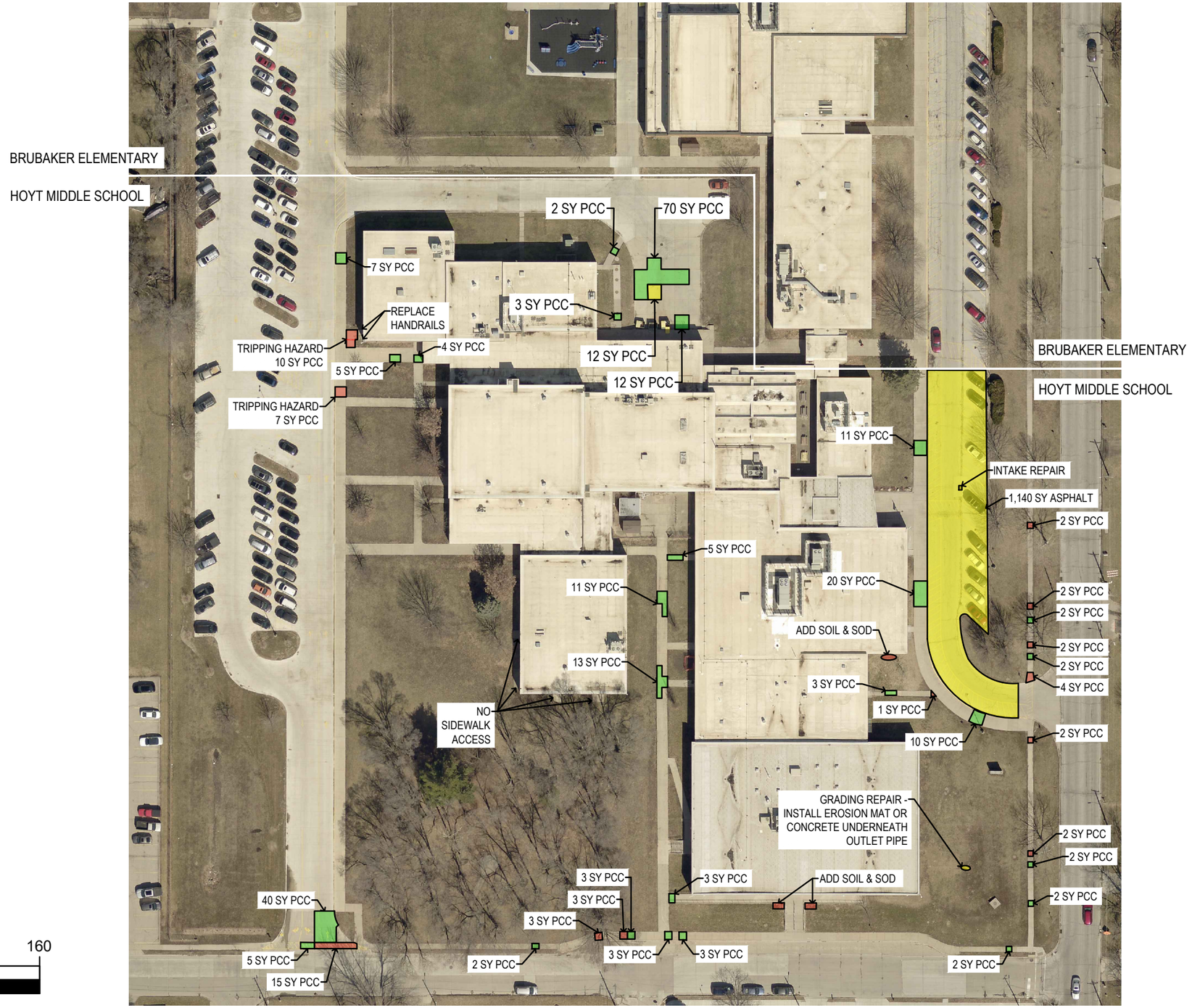
		Project Costs
Roof Replacement	Remove approx. 60,000 SF of PVC roofing and insulation over roof areas A through O and Q (not P or R), as well as M from Brubaker. Install code compliant insulation and TPO roofing. Approx. 2030.	$2,000,000
Roof Access Installation	Provide 6 VLF ladder from roof area B to E. Provide 18 VLF ladder from roof area E to F. Provide 18 VLF ladder from roof area F to I. Provide 4 VLF ladder from roof area G to H. Provide 4 VLF ladder from roof area Q to R.	$30,000
Exterior Duct Painting	Remove rust and paint goose neck roof exhaust duct. Duct approx. 30" x 40" and 60" tall.	$6,000

Pavement Replacement	Remove and replace 122 SY of PCC. For locations, refer to civil site plan exhibit found in the appendix of this report.	$25,000
Sidewalk Repair	Repair damaged sidewalks across the site. Approximately 128 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$30,000
	Total 5-10 Year Project Costs:	**$2,091,000.00**

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 at least a sink, side table, chair, and privacy door hardware.	$5,000
Gas Line Study	Design a way to prevent someone from climbing the two exterior gas lines north of room 1677 and west of room 1456. Consider taking the gas line inside the building and up through the roof in lieu of an exterior fence or other screening. Consider combining with same study at Brubaker.	$5,000
Entry Refinish Study	Replace the fiber cement panels at entry with one of the following: a more durable cladding, mounted to the existing sheathing and framing; or a more durable cladding, supported by some either means (this would be required due to dimensional and/or weight differences).	$5,000
Designated Hardened Area Study	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
Chilled Water Study	All cooling for the building is currently handled by several DX coils located in air compressors. Consider installing a chilled water system, piping pumps and replacing DX coils with chilled water coils.	$15,000
	Anticipated Capital Investment: $4,400,000	
	Anticipated Capital Investment Costs	**$4,400,000**
	Total Study Design Service Fees	**$32,500**

APPENDIX



5+ YEAR REPLACEMENT

3-4 YEAR REPLACEMENT

1-2 YEAR REPLACEMENT

NORTH

GRAPHIC SCALE

80 0 40 80 160

bbs ARCHITECTS ENGINEERS

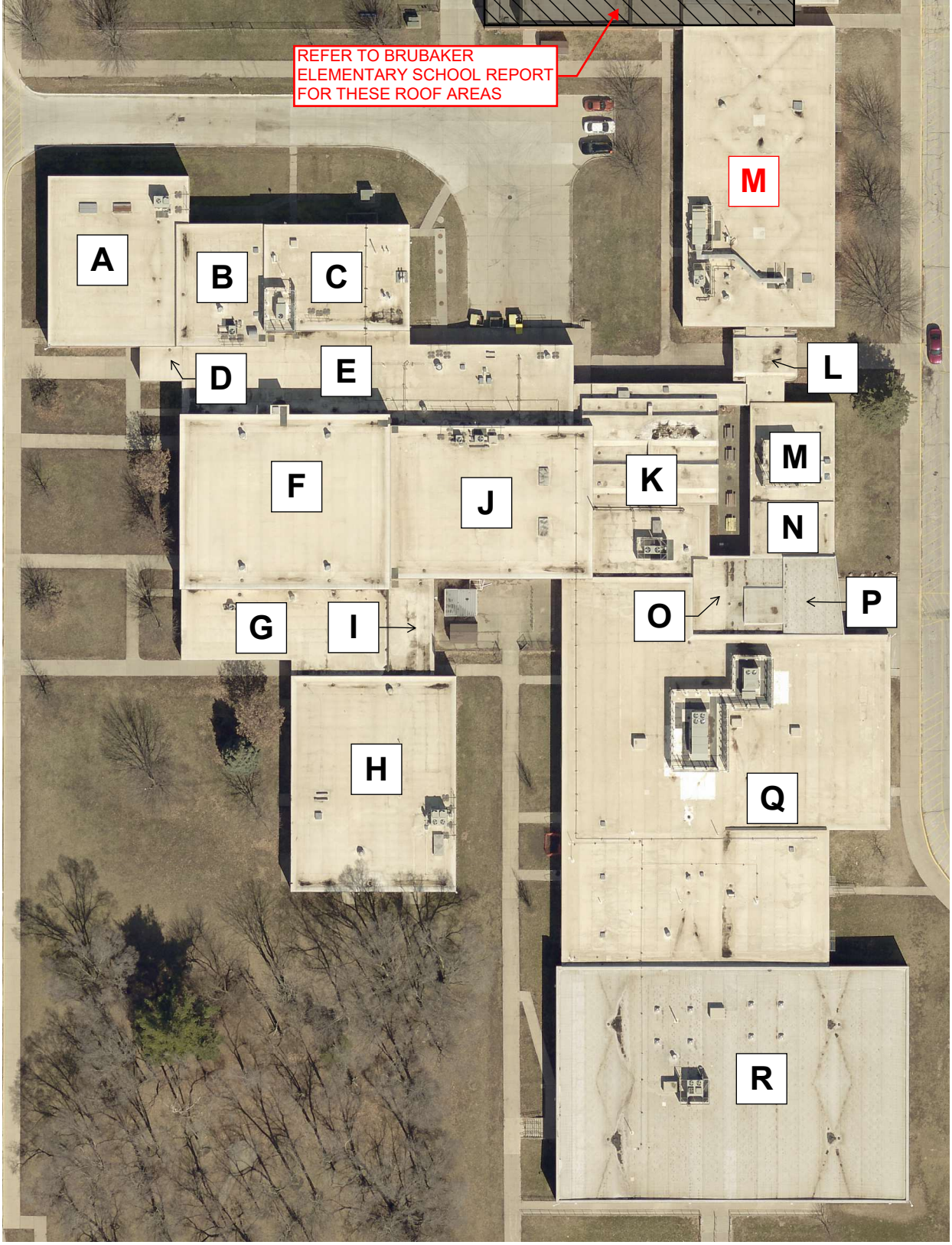
BISHOP ENGINEERING +

HOYT MIDDLE SCHOOL

EXHIBIT

PROJECT # 230286-44

DATE 2/9/2024



N

bbs ARCHITECTS ENGINEERS

23055 - DMPS Facility Conditions Assessment
Roof Identification Image
Hoyt Middle School
February 6, 2024

HOYT MIDDLE SCHOOL

2700 E 42ND STREET
DES MOINES, IOWA 50317

FIRST FLOOR

NORTH