

# BUILDING CONDITION REPORT



**JEFFERSON HIGH  
SCHOOL DISTRICT #1**  
July 21, 2020



SMA|ARCHITECTS

# BUILDING CONDITION REPORT SUMMARY

- Original building opened in 1909
- 5 additions, started in the 50's, with the most recent 90's
- Current student enrollment around 300 students, with students from Montana City, Jefferson City, Clancy, Boulder and Basin
- Several visits of the design team allowed for an in-depth study of the school and its systems, including: Architectural, Utilization, Structural, MEP
- Conducted User-Group Meetings to understand their experiences.



# EXTERIOR / SITE

- Overall in good shape with regular maintenance
- Modularity: Safety & Security
  - Construction quality only good for temporary, not long-term
  - Separated from other building functions and community
- Site & Athletics
  - Current 23 acre site considered small for number of students (recommend 30-33 acres for current enrollment; 1 acre/100 students + 30 acres for High School\*)
  - Site is constrained by tennis courts, pool, and irrigation ditch for future expansion. Some small opportunities still present.
  - Ex: EHHS is 35 acres for 600 students
- New Roof

\* Association for Learning Environments



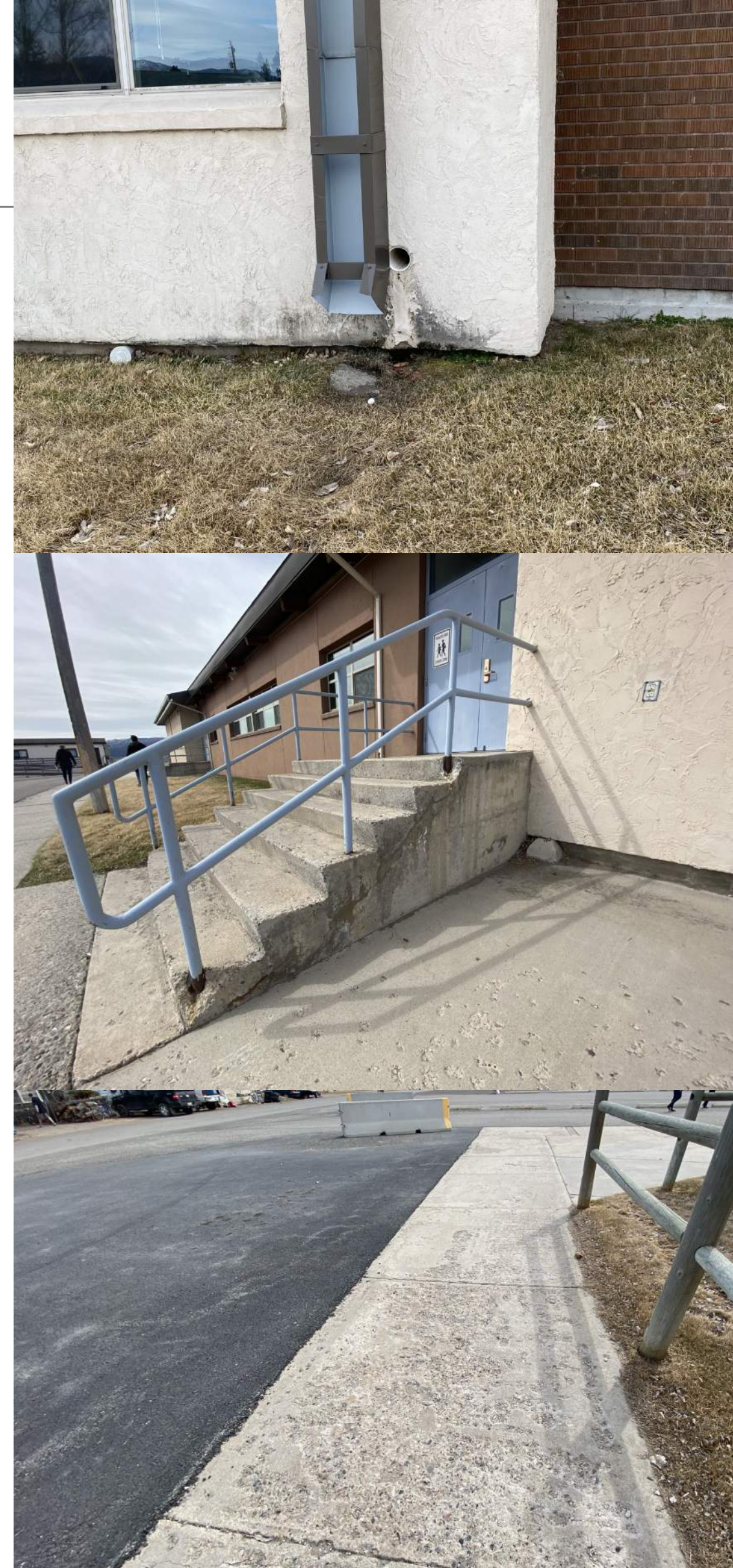
# EXTERIOR / SITE

- Current Site
  - Parking & Bus works well for the large part.
  - South Main Street entrance and surrounding green space provide good community access.
- Athletics
  - Track surface is not all-weather and cannot support large track events, i.e. divisionals/state meets.
  - Football field does not hold up to wear & tear, has mosquitoes.
  - Tennis courts are shared with the City, and in good condition, but do pose some scheduling conflicts.
  - Athletics are concerned over remaining competitive against Helena and East Helena High Schools with better athletic facilities.



# EXTERIOR / SITE

- Foundation in good condition
- Some Roof drains do not direct water away from foundation. Add splash blocks or other to direct water away from building.
- Exterior concrete stairs and exterior concrete flatwork is spalling and cracking.
- Entrance accessibility is good.
- Some damage or discoloration of exterior finishes, but otherwise in good condition.
- Exterior doors and windows in good condition.
- Security:
  - Not able to see visitors as they approach building



# INTERIOR | GENERAL

- Primarily in good condition, with regular maintenance.
- Cohesive feeling despite multiple additions
- Finishes overall fair to good
- Acoustical ceiling tiles are worn and need replacement in some areas.
- Flooring: mix of vinyl composition tile, wood gym, masonry block and gypsum board finishes.
- No Hazardous Material Inspection completed, however in our experience many are likely to be Asbestos Containing Materials.



# HALLWAYS/CORRIDORS

- Width of hallways is narrow for modern school. Typical width: 8', with lockers on both sides 10'. East Middle School has 12' hallways.
- Ceiling tile showing age with moisture damage
- Walls are CMU block that is durable and vandal-resistant, but poses problems with echoing and an institutional look.
- Flooring is largely vinyl composition tile that holds up well but requires significant maintenance.
- Lockers in good condition.
- Hallways lack common or flexible “breakout spaces” that support many 21st Century Learning principles.
- Current Cafeteria/Multi-Purpose Space does not have exterior views, is fairly small, and is not very inviting.



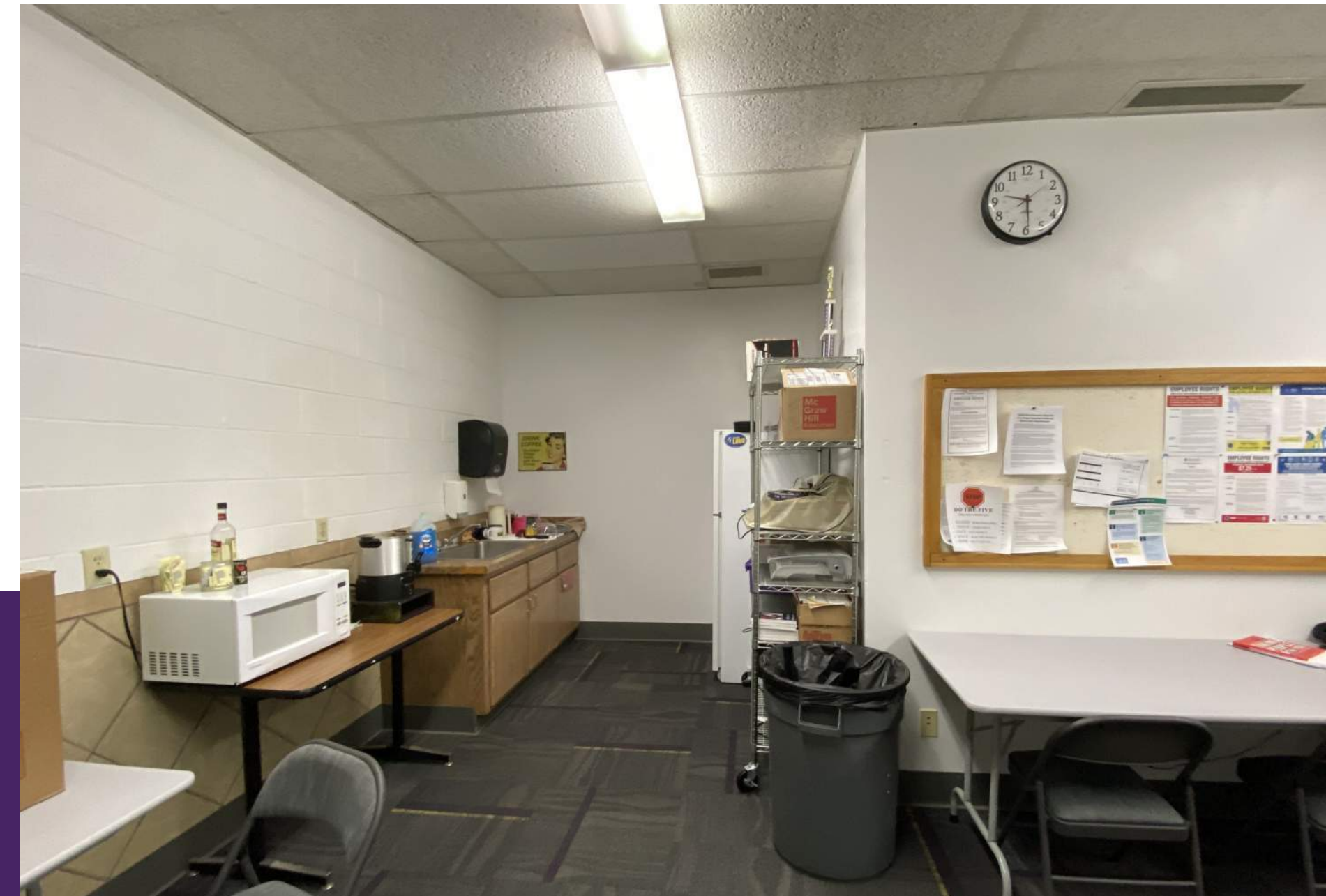
# MAIN OFFICE AREA

- Busy, central location with high traffic.
- Carpet helps acoustic control, as does acoustic ceiling.
- Ceiling is dated and worn.
- Seating/Waiting Area does not provide privacy
- No conference room for larger group meetings or private conversations
- Principal's office is small and could be more welcoming
- Office location does not meet typical security needed in a 21st Century School
- An intruder can access the school once allowed through main entry doors.
- Main office does not have secure interior vestibule to buzz visitors in.



# ADMIN, COUNSELING & NURSE OFFICE

- Many of these rooms appear to have been retrofitted into existing rooms
- No visibility from front desk to sick bay for secretary to monitor while fulfilling both duties
- Lack of private conference area
- Central Office located here and is busy, difficult to get work done next to main circulation



# KITCHEN & CAFETERIA

- Full during mealtimes, students often use classrooms to eat
- Finishes are same as rest of school
- Kitchen was clean, well-maintained with small recent renovations including:
  - Upgraded hoods with suppression system built-in
  - Three compartment sink
  - Loading dock and storage adequate



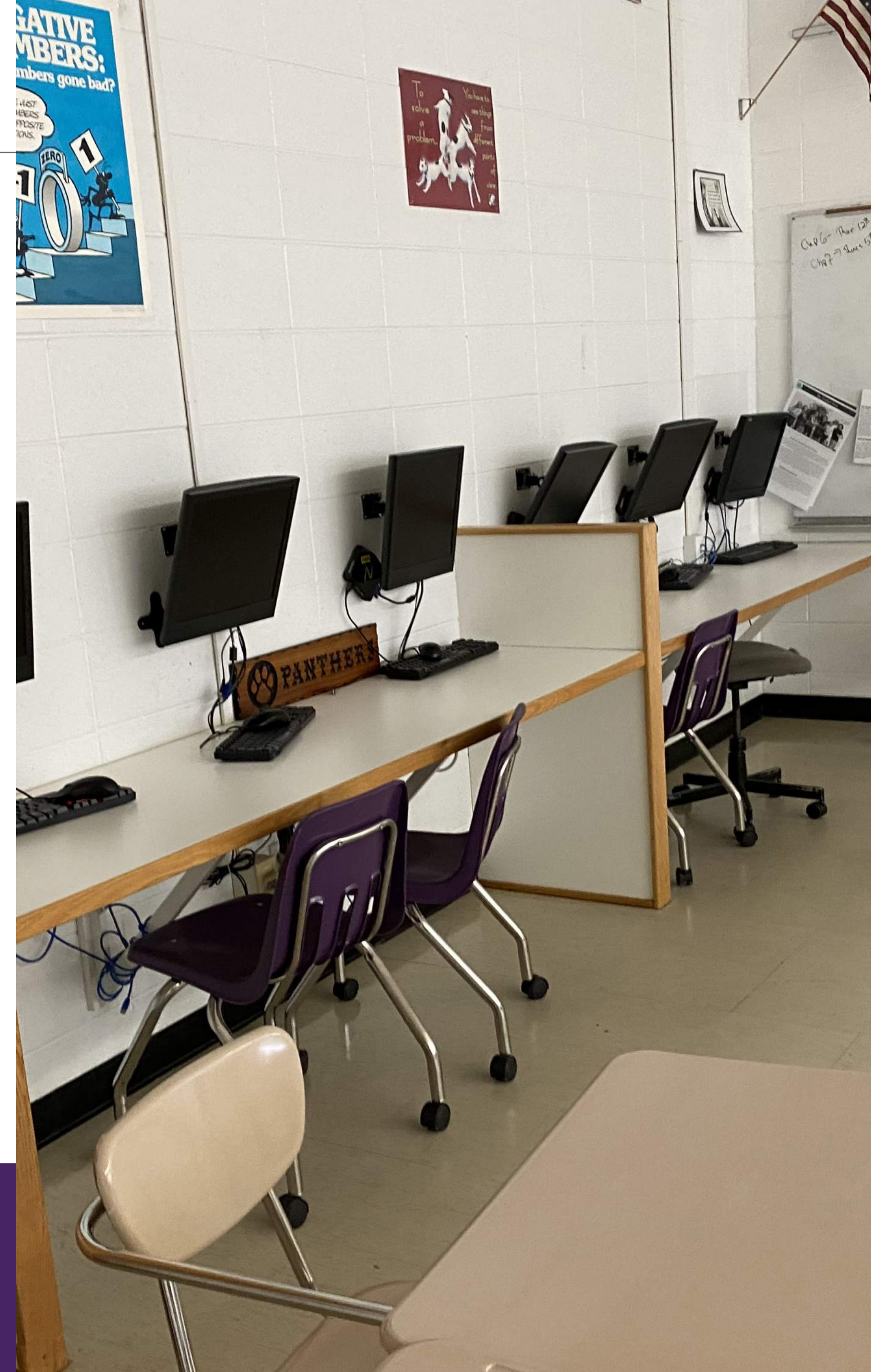
# CLASSROOMS | GENERAL

- In general, functioning well, most teachers spoke positively about their space
- Handful of teachers reported their classrooms are too small
- Current classroom SF are adequate for most class sizes, but do not meet 21st century classroom recommendations and cannot accommodate growing class numbers.
  - Maximum students per class, per State of MT is 30 students.
  - Recommended SF/student is 45-55sf for general classrooms per Association for Learning Environments.



# CLASSROOMS | GENERAL

- District has retrofitted classrooms with many modern amenities, some technologies still lacking [ex: short throw projectors, USB, smart boards, TVs/AV systems]
- Clock/Bell system is aged
- Severe lack of electrical outlets throughout all classrooms – reported by teachers
- Ceiling tiles also have worn condition



# CLASSROOMS | SCIENCE

- Physical Science room is sized closely to modern schools at 1450sf
- Adequately equipped with eyewash and 2 exit doors
- Life Science is much smaller at 885 sf, including lecture and lab space = severely undersized
- Recommend 60 sf/person for science activities [MT standards of 1800sf for 30 max students]
- Inadequate exhaust



# CLASSROOMS | FAMILY & CONSUMER SCIENCE

- 1800 sf is adequate by modern standards  
[recommend 60-65 sf/student]
- Quantity of equipment and frequent use by food pantry and breakfast program increases usage
- Finishes in moderate to worn condition
- Combination of consumer-grade and commercial-grade equipment
- User groups indicated additional kitchen units are needed and ventilation is a concern
- Program is growing in popularity and will need continued investment



# LIBRARY & COMPUTER LAB

- Nice high ceilings, with nice finishes (wood truss and nice lighting)
- Main circulation counter not ADA
- Noise between the Library and Computer Lab are a common complaint
- Regulating temperature is difficult with computer and occupant heat. Unable to utilize windows if buses are queued outside



# CLASSROOMS | SPECIAL EDUCATION

- Special Ed is not equipped with the spaces many modern schools have, including: separation spaces, calming rooms, life skills, private bathroom
- Privacy and crowding were heavily cited concerns
- Need for dedicated sensory room
- Better ventilation needed
- Dedicated restroom needed
- Life Skills opportunities would be a benefit (kitchenette and washer/dryer)
- Overall space is too small for student population.
  - Current room is ~400sf. Helena Elementaries have 1500-2000sf, EHHS has 1650sf = 80-110sf/student.



# CAREER & TECHNICAL EDUCATION (CTE)

- Location and spaces currently serving their uses well, have good equipment and overall a good space for the programs overall.
- Floor finish can be hazardous in work conditions with sawdust present
- Light control for video presentations is needed
- Storage / spray room combination causes overspray issues
- Size of spaces appropriate for current class numbers
- Small Engines: ventilation of fuel vapors concern for danger of fire or explosion near welding



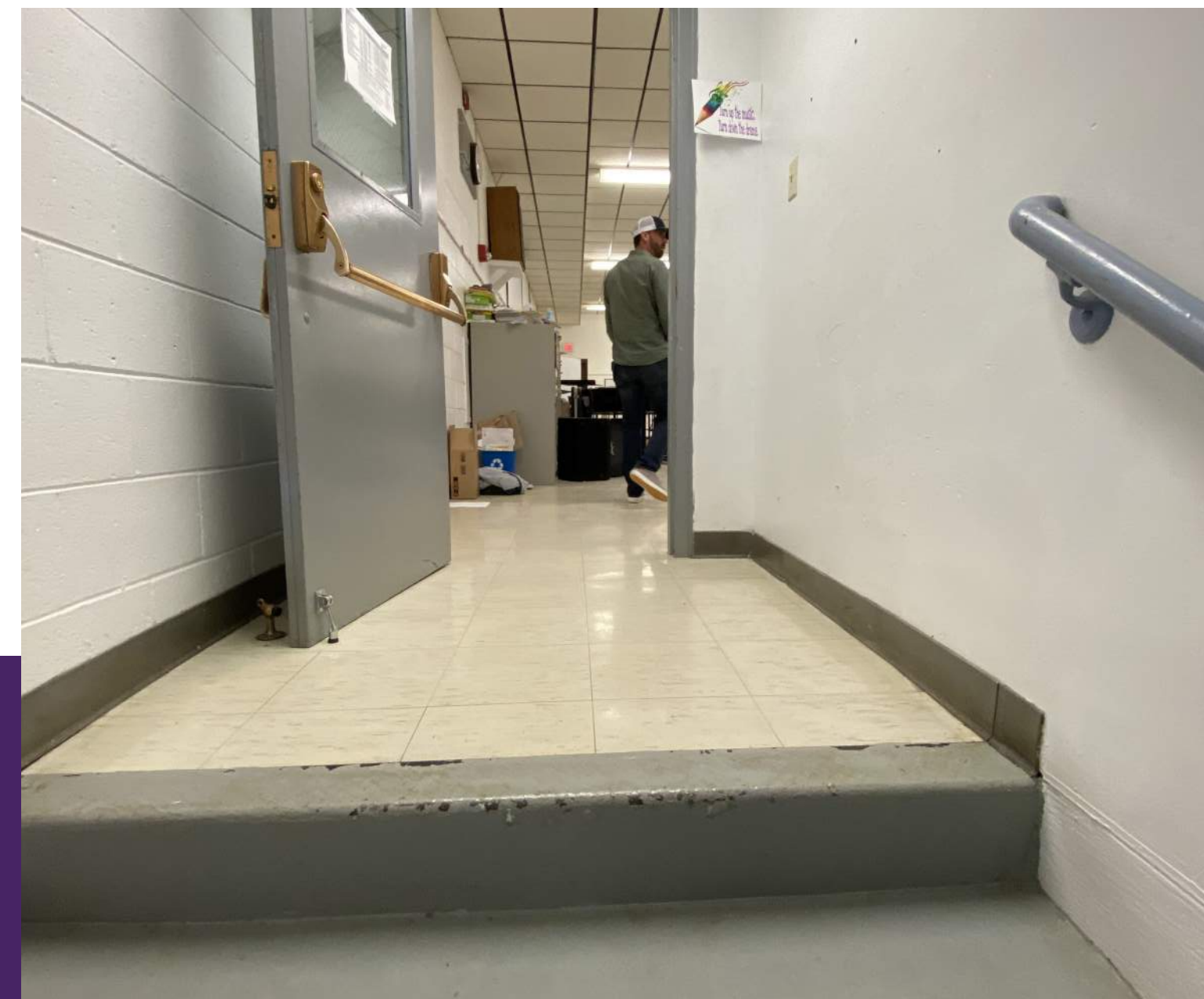
# CAREER & TECHNICAL EDUCATION (CTE)

- Welding: room limits arrangements, # of welding booths is not enough, fabrication capabilities limited
- CAD Lab: good equipment/technology, access and circulation due to floor plan is difficult and can be busy
- Overall
  - Electrical outlets severely limited
  - Lighting dated and inefficient
  - Storage is undersized
  - Number of breakers in shop area makes it difficult to track down a failure



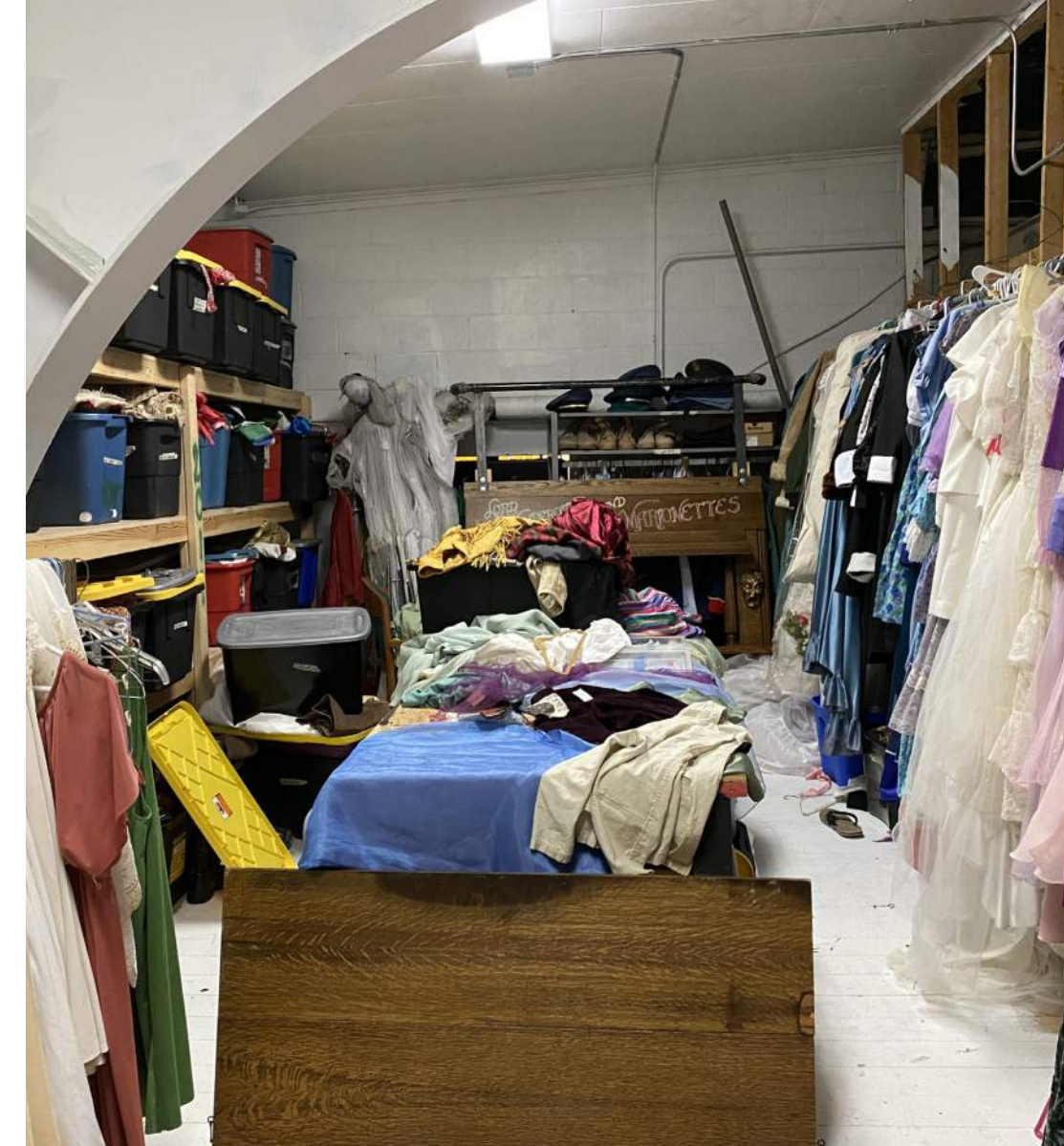
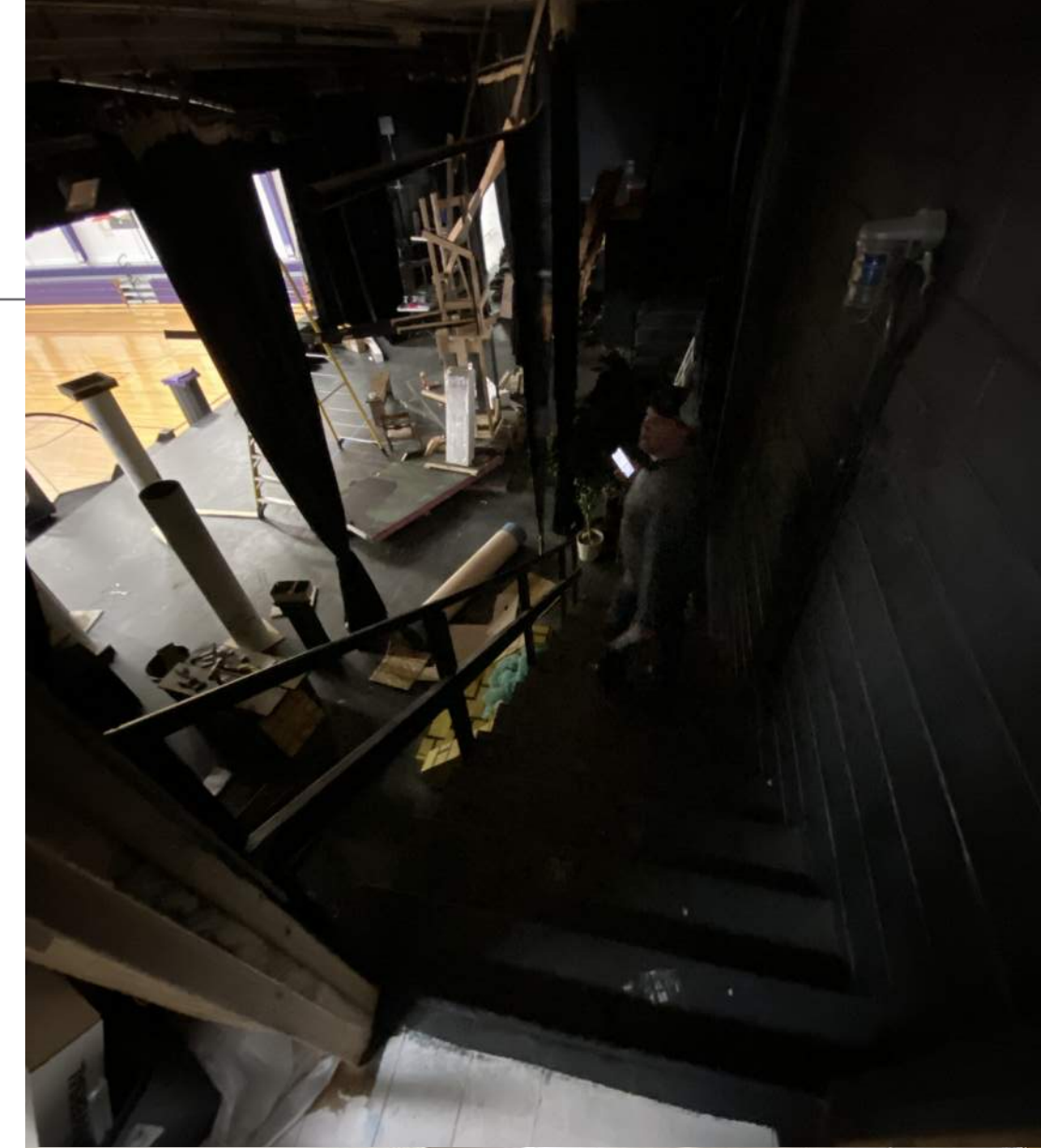
# MUSIC / BAND

- 2700 sf total with adequate space for seating, storage, chairs and office space
- Acoustical treatment is adequate but could use some improvements if sound quality dictated
- Room/s not ADA accessible



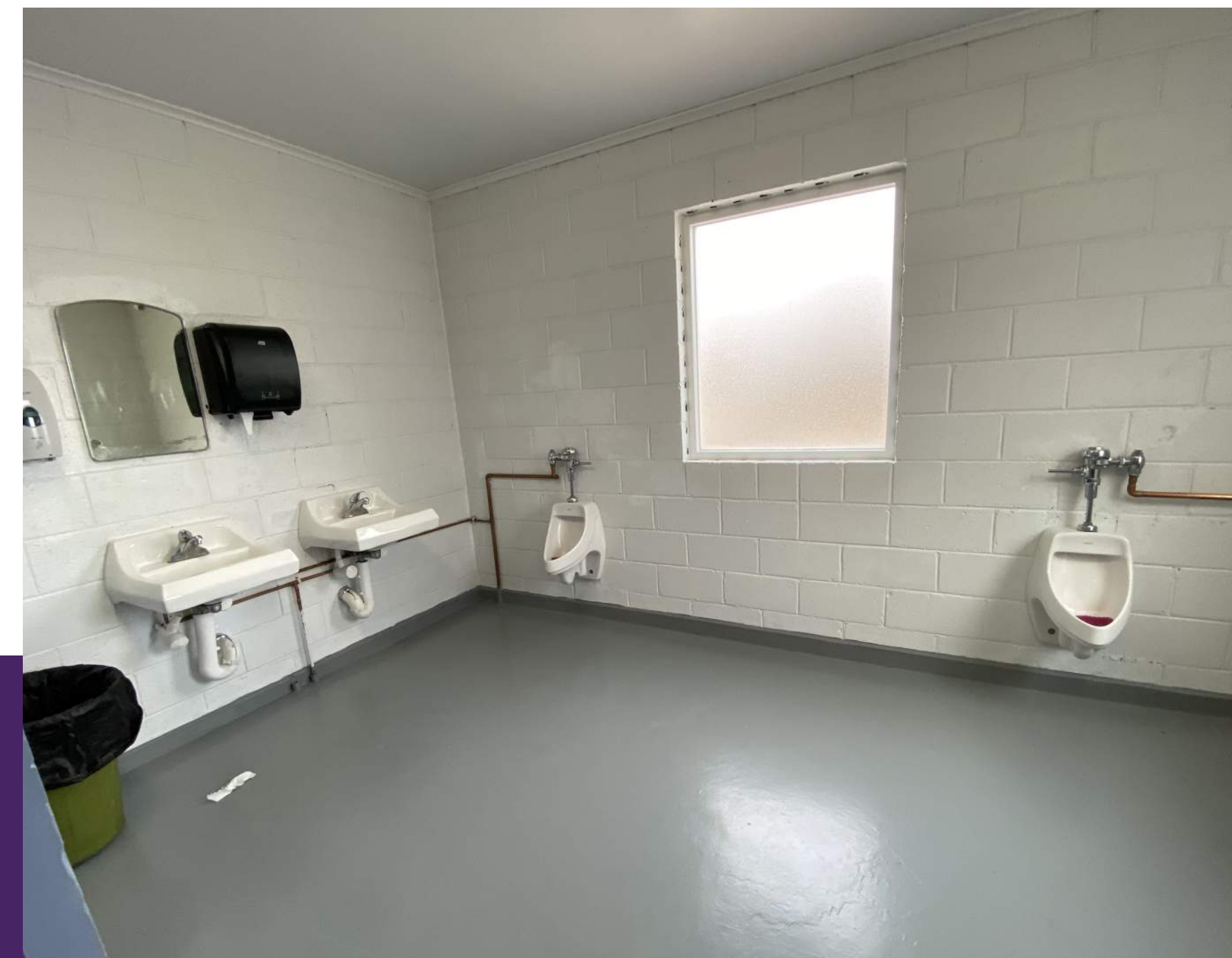
# DRAMA / THEATER

- Popular and successful program at school and within community
- Currently using stage in the original existing South Gym
- Gym/Stage area has reported acoustic challenges from the hard surfaces in the gym
- Space is limited on stage and in storage areas
- Wooden stairs to storage areas are aging and limit accessibility
- Access to construction materials for set design is limited and poses challenges
- Sound & lighting need upgrades
- Theater classes/rehearsals limit usability of gym purposes or athletic practices



# SOUTH GYM

- Gym floor in good condition and was recently refinished
- Lighting is high-bay fluorescent and does not meet sufficient lumen output
- Acoustics for athletics, drama and theater have added spray insulation but still inadequate. Material may be flammable.
- Restrooms in vestibule lack privacy and are not ADA
- Additional gym is an asset but cannot be used to full potential with scheduling conflicts with drama/theater



# ART ROOM



- Not ADA accessible
- Ample lighting
- Acoustical ceiling and recessed lighting is in new/good condition
- Other finishes also good
- Has suspended power outlets, which is likely adequate compared to power outlets in the rest of the building
- Exterior exit stairs aging

# MAIN GYMNASIUM

- Notable and beautiful asset to JHS; newest addition
- Accommodates full size and practice courts with bleacher system
- Exiting and access is good, as well as finishes, paint and lighting
- New gym reserved for athletics competitions, and older gym used for practice or smaller sports which causes challenges with scheduling due to demand from theater/drama in S. Gym area



# WEIGHT & WRESTLING ROOMS

- Accessed via stairs to the mezzanine
- Finishes well maintained, but ceiling tiles showing damage, warping and stains
- Not ADA accessible
- Stair riser height taller than allowed code (measured at 7.5", code is 7")
- Mezzanine not designed as weight or wrestling room—drawings say designed as “Multi-Purpose Room”
- Weight of equipment and heavy plates striking composite slab is likely causing damage faster than intended
- Overall weight room undersized for students and equipment, more equipment and space needed to accommodate current class sizes
- Wrestling space cannot accommodate women’s and men’s wrestling
- Communication between weight and wrestling is only through telephone to the gym (difficult for setting up mats, etc.)

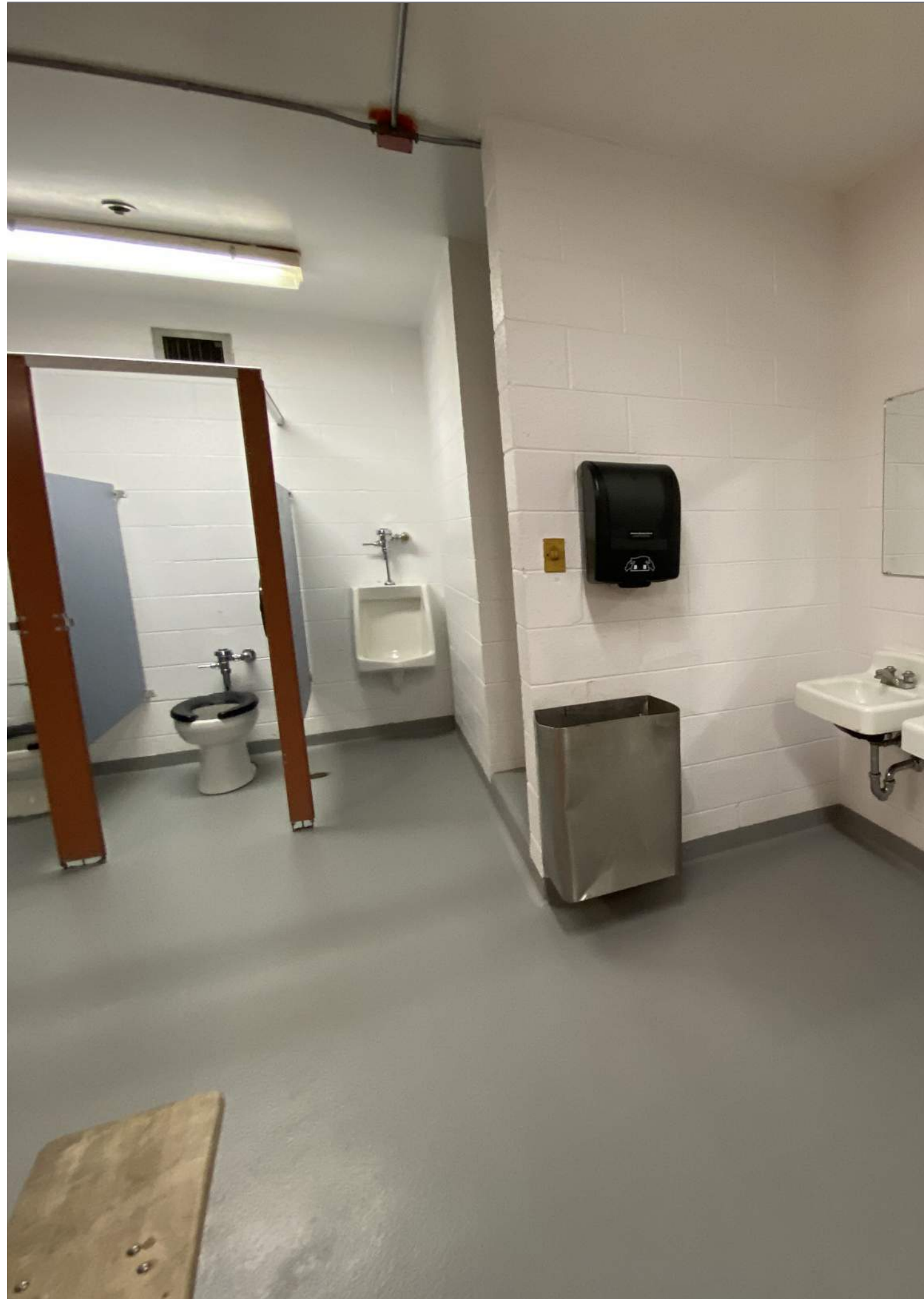


# MAIN LEVEL LOCKER ROOMS

- Used by general students for gym, weight room and wrestling
- One of few places in school with true ADA accessible toilet stalls
- Carpet flooring not ideal and can lead to mold and fungus growth
- “Gang” type showers can be a liability and are generally avoided by students to avoid body shaming and bullying
- Only a few wash basins are usable due to location



# LOWER LOCKER ROOMS



- Outdated in layout and functionality
- Adjacency problems, poor ventilation and accessibility problems
- Used by athletics such as football, tennis, track
- Finishes overall good
- Distance from rest of school creates supervision issue for staff and faculty
- “Gang” type showers- privacy concerns and bullying probable
- Toilet stalls not ADA accessible
- Men’s stall doors removed
- Other concerns included having enough storage and size of space for accommodating full teams

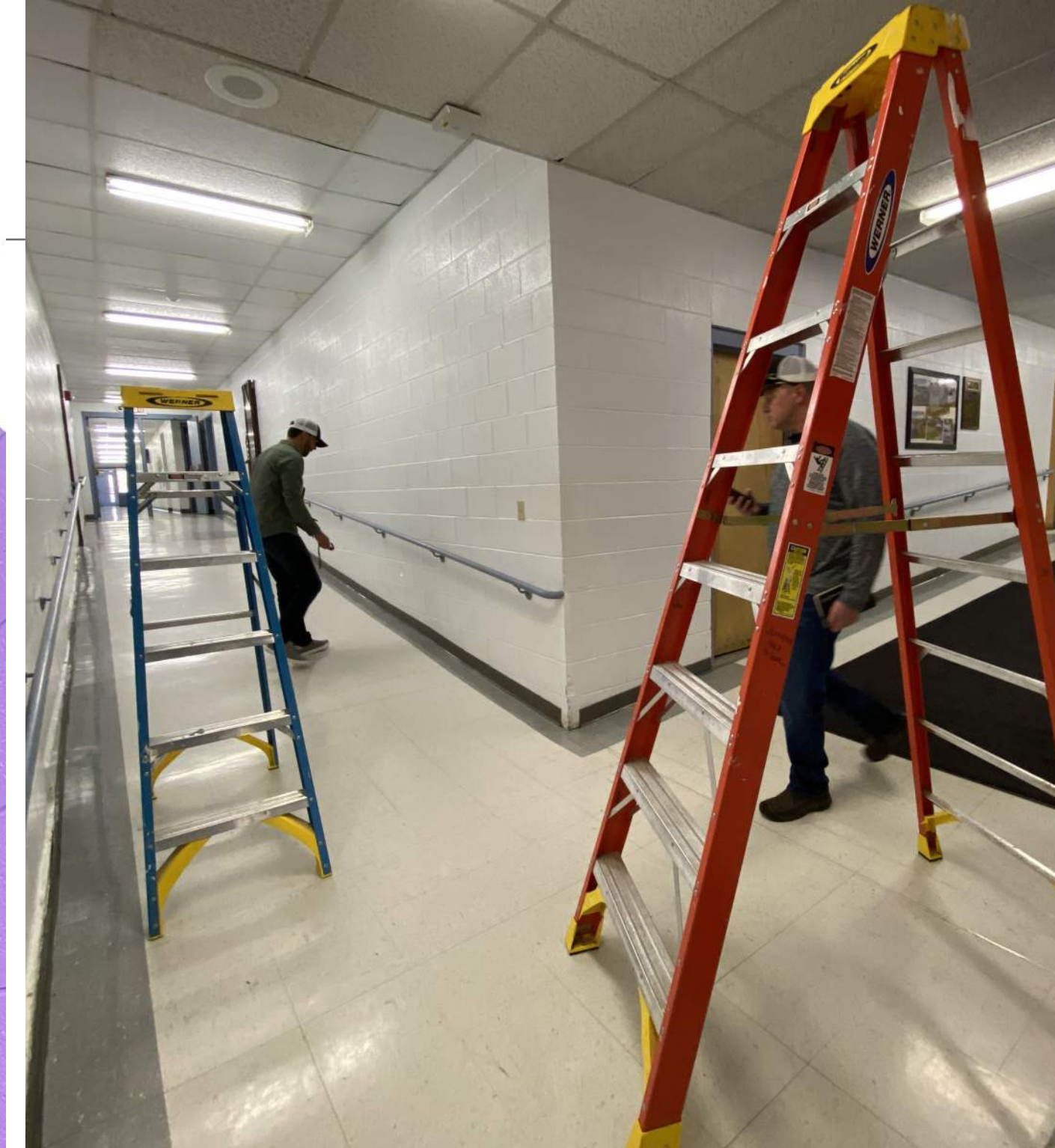
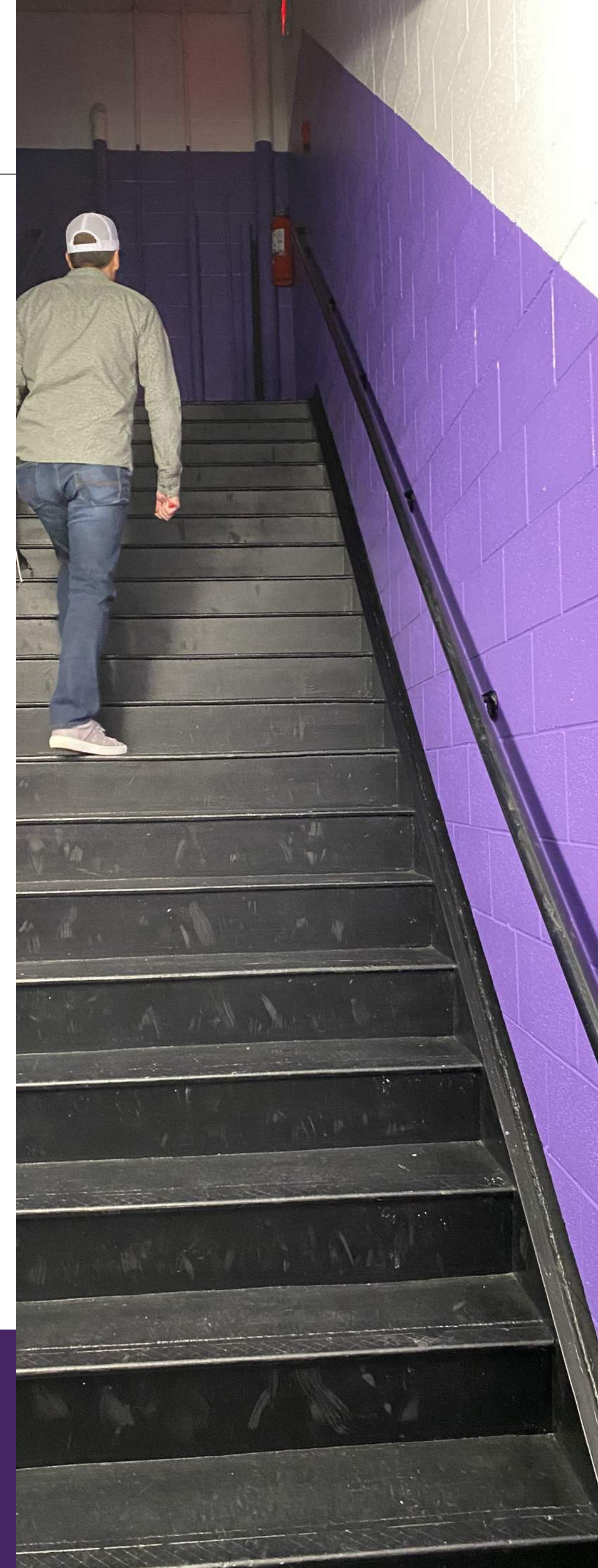
# RESTROOMS

- Most are in adequate condition
- ADA is a common problem
- Inadequate ventilation is a common complaint
- Fixture count appears adequate



# INTERIOR STAIRWAYS & RAMPS

- Almost all ramps meet or nearly meet codes for slope, landings and railing requirements
- Stairs also meet code, excluding the weight room, and drama storage



# BUILDING | PLUMBING

- Kitchen
  - Indirect drain lines revised to provide air gap
  - Prep sink piped as an indirect drain with air gap
  - Grease interceptor replaced
- Install mixing valves in bathroom lavatories
- Domestic water entrance lines leak
- Welding exhaust fan repaired/replaced



M21: Welding Shop Exhaust Fan

# BUILDING | MECHANICAL

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- Furnaces need to have CA ducted, wall openings covered & damper arrangement revised
- RTU for Welding replaced
- RTU for Wood Shop replaced
- Weight Room & Wrestling heaters replaced



# BUILDING | ELECTRICAL

- Life Safety Items:

- Emergency & Egress Lighting Upgrades
- Motor Control center cover plates missing
- Conduit showing signs of electrical fire at panel D1

- Code Issues

- Electrical gear working space clearances
- Remove foreign objects from being mounted on electrical gear

- Safety Concerns

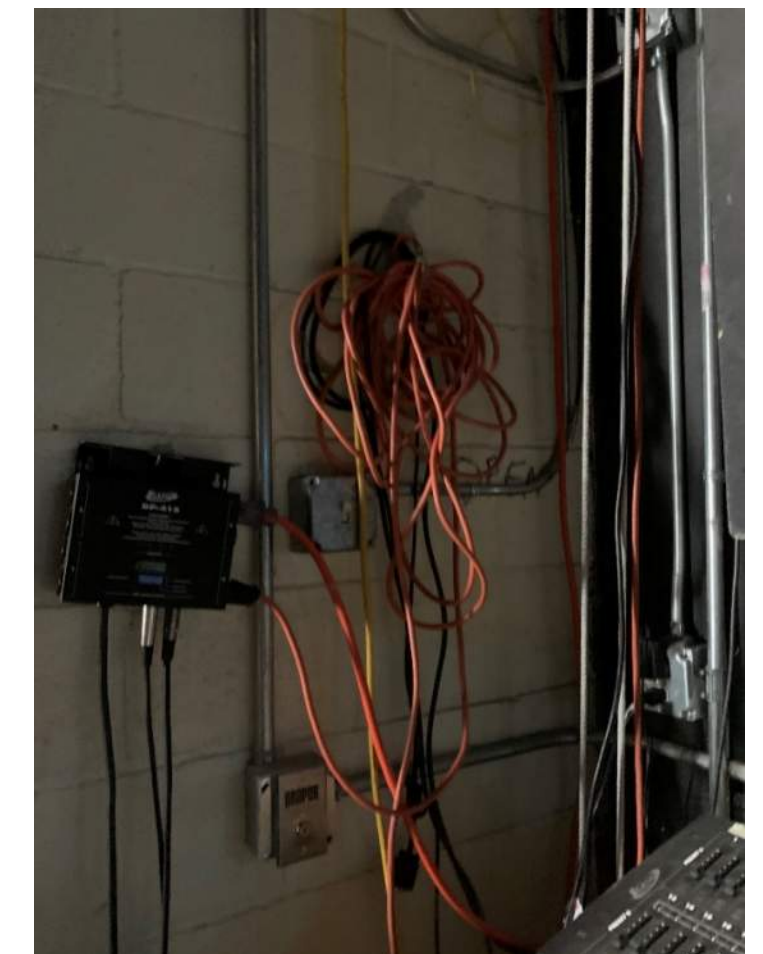
- Extension cords in South Gym Stage
- Extension cords & power strips in Library
- Communication cables routed along floor

- Miscellaneous

- Conduit on exterior wood shop to be properly mounted to building and not on grade
- Adequate space for laptop charging
- Upgrade lighting to LED



E5: Conduit shows signs of electrical fire and should be replaced.



E7: Extension cords at stage area.

# BUILDING | STRUCTURAL

- Overall in good condition, considering its age
- Very few signs of deterioration, damage or over stressing
- Recommend replacement of weight room floor in damaged areas of concrete slab.
- General roof to wall connections
- Treat exposed wood roof framing ends on exterior



Figure 5. Deteriorated Concrete Floor Slab in Weight Room (1985 Addition)



Figure 6. Deformed Metal Deck Below Weight Room (1985 Addition)

# UTILIZATION STUDY

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- 8 periods per day, including home room over 4 day school week
- Average class size is compared to average associated square foot per student, as it compares to recommendations for general classrooms
- Many classrooms are very well utilized at 85% or above, which may pose some scheduling difficulties.
- Most spaces cannot accommodate increases in enrollment and would make for very crowded classrooms.
- The overall school utilization accounts for all spaces. Elective courses typically do not see as high of utilization as general education courses.
- Challenging to add more students without adding more classroom space. Most general classrooms above recommended utilization (70-85% is recommended).
- An increase in overall attendance will max out general classrooms, then other areas will fill up (FCS, Band, Gym, Art)



# CONCLUSION

Overall the building is in pretty good shape. We consider these to be of higher priority:

1. Modular classrooms removal or security, safety/security upgrades school-wide
2. ADA accessibility to classrooms: music, art, weight room
3. ADA accessibility in common restrooms (clearances, turning circles, etc.)
4. SpEd size increase, adding features, toilets, etc.
5. ADA accessibility to basement locker rooms (and security, privacy, etc.)
6. Drama/theater improvements, new location, etc.

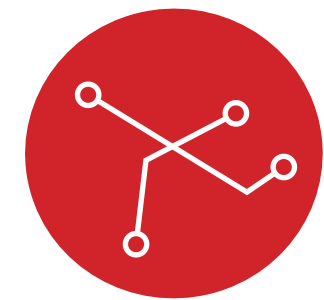


# 21<sup>ST</sup> CENTURY LEARNING ENVIRONMENT



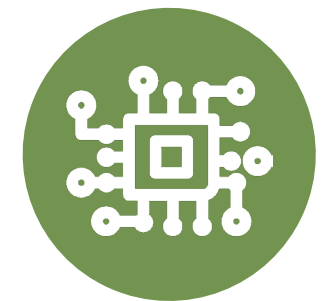
## COLLABORATION

Spaces that encourage and support collaboration.



## FLEXIBILITY

Flexible spaces and furniture supports varying uses.



## TECHNOLOGY

Outfitted with technology throughout for various purposes and projects.



## CREATIVITY

Support hands-on and interdisciplinary learning.



## COMMUNICATION

Create communities and support group learning and collaboration.



## CRITICAL THINKING

Freedom to explore, research and gain understanding by providing tools.



# LAND REQUIREMENTS

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Recommendation for high school property size is 30 Acres + 1 acre per 100 students

- **Estimate: 300 JHS Students = 33 acres**

- **Existing: 23.3 acres** (estimate 20+/- acres are able to be utilized)

- East Helena High School = 35 acres for 600 students

- Recommend for JHS: 25-30 acres depending on site

- Things to consider when searching for property:

- Adjacencies

- Remediation / Environmental

- Topography

- Other

- Access / Arrival



## WHAT IS ACTUAL NUMBER OF STUDENTS THE FACILITY CAN ACCOMMODATE, ASSUMING NO EXPANSION?

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- Nearly all general classrooms are at or above recommended utilization (70-85%). Many are also above recommended SF/Student (45-55 SF recommended). Adding students to these classrooms will become very crowded.
- Overall, general classrooms are at or nearly at capacity. Adding students will impact the spaces that currently have higher than average SF/student. Spaces that typically appear to have space also have special uses: FCS, Band/Choir, Science, etc. These spaces require more average SF/student for specialty equipment/furniture and tasks.

## WITHOUT EXPANSION, HOW COULD JHS ADDRESS THE ADA ISSUES OUTLINED IN THE REPORT?

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- Moving classes to another location in the building or to a new addition.
- ADA renovations can be costly. Especially reconfiguring for elevators, etc.
- Minor renovations can resolve toilet room and shower accessibility.



# WHAT IS COST/SIZE OF A NEW SCHOOL OR ADDITION?

EAST MIDDLE  
SCHOOL  
Butte, Montana

**\$22M**

**166,000** SF  
30,000 sf addition + reno

**600** students

**\$ 133**/sf

KENNEDY  
ELEMENTARY  
Butte, Montana

**\$1.8M**

**5,450** SF  
addition

**85** students

**\$ 330**/sf

EAST HELENA  
HIGH SCHOOL  
East Helena,  
Montana

**\$25.6M**

**105,000** SF  
addition + reno

**600** students

**\$ 244**/sf

CENTRAL  
ELEMENTARY  
SCHOOL  
Helena, Montana

**\$16M**

**64,000** SF  
addition + reno

**360** students

**\$ 250**/sf



**QUESTIONS?**

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