Work Session Meeting Information

MODUS Engineering and OPN Architects shared their assessment of the elementary school. The group clarified and responded to information that was shared in a written report (on the website).

The role of the assessment was to provide information on "current conditions" and not to provide recommendations. It was to validate/dispute our thoughts and what we believe with data. Additionally, it does not speak toward "educational quality" in the building setting…it is simply about "the building we have" at the current time, and the cost of the deficiencies.

Some aspects of areas addressed in the building were the following areas:

1. Building History
2. Code Compliance
3. ADA Compliance
4. Exterior Conditions
5. Mechanical Code Compliance and Systems Condition
6. Electrical Code Compliance and Systems Condition

The assessment providers also provided a cost estimate of $9.1 million to make these changes, but also added that this is only for these updates. It does not include any of the following:

- Extra space - No extra space is gained, and some space will be lost due to the improvements in safety.
- Painting
- Flooring
- Technology upgrades
- General Updates as a result of the improvements
- Educational quality and effectiveness in the building as a result of spaces and limitations
- Site appropriateness

Additionally, some specific areas of concern include the following:

- Life Safety, including the following:
    - Location of pickup and dropoff of students by caregivers and those walking to or leaving school
    - Evacuation of the building in case of emergency
    - Potential of significant results if a fire occurred, specifically in the 1800's part of the building and the wood structure it consists of
- Property-Limitations with the current space where the elementary is located and surrounding school property
- Streets and state highway near the school; It is not common practice for students to have recess on a street, albeit blocked off, or next to a state highway with no significant barrier between the school/studnets and the highway.
- Lack of ADA compliance

These are all in direct contrast to current standards for schools.

The following is a brief "Executive Summary" included in the report, followed by the six areas that were addressed in the report

Participants

BELLEVUE COMMUNITY SCHOOL DISTRICT

Tom Meyer, PhD, Superintendent of Schools
Brett Ernst, Maintenance Director

OPN ARCHITECTS

Roger Worm, AIA, Principal
Vicki Hyland, ALEP, Associate, K12 Specialist
Susan Bowersox, AIA, Senior Project Architect
Nick DeCarlo, AIA, Architect

MODUS ENGINEERING

Mike Brocka, PE, Principal
Matt Gumm, PE, Mechanical Engineer
Lon Bromolson, PE, Electrical Engineer

Executive Summary

In August 2021, OPN Architects and MODUS Engineering met with Superintendent Tom Meyer and Maintenance Director Brett Ernst to tour the existing Bellevue Elementary School facility. Following this meeting, OPN and MODUS were selected by district leadership to perform a facility assessment. A kick-off meeting to initiate the process and discuss details of the assessment was held in September 2021. Detailed observation visits were performed in late October and early November 2021. Deficiencies related to code, ADA accessibility, building condition, and mechanical and electrical systems were recorded and are compiled in this report (December 2021).

A summary of our observations is outlined below, with detailed assessments for each topic on subsequent pages.

Code Compliance

The original 1848 facility and the later additions were found to have a number of significant code and life safety challenges. No portion of the elementary school contains an automatic sprinkler system, which requires certain elements such as doors and walls at corridors to be a fire-rated construction. We observed only a handful of fire-rated assemblies. The 1848 building does not have any accessible means of egress out of the building, and many routes were found to be non-compliant and would require modification to the building layout, likely to the detriment of existing academic spaces. Certain exits such as the exterior fire stairs from the second floor of the 1848 building cannot be made compliant and would potentially require a new stair tower to be constructed.

Many corridors in the 1848 building are narrow and do not meet minimum exiting requirements. Many restrooms and toilet stalls throughout the building do not meet the minimum clearances required by current plumbing codes and would require significant reworking of these spaces to be brought into compliance. Most stairs in the original building or later additions were found to be non-compliant and would need significant modification or complete replacement.

ADA Accessibility

All portions of the elementary school have ADA deficiencies, but the greatest number were found in the 1848 facility. Tight corridors create restrictive spaces at classroom doorways, many of which cannot be made ADA compliant without creating a new recessed doorway. None of the restrooms in the elementary facility were found to be fully ADA compliant. All restrooms have varying degrees of non-compliance, but several would require significant modifications or the construction of new accessible restrooms.

There are many instances where ramps have been installed to connect variations in floor elevation at both the interior and exterior, however most of these were found to be a non-compliant slope, requiring the construction of a new ramp. Many classroom sink casework, transaction counters, serving counters, and drinking fountains are not ADA accessible and would need to be replaced.

Exterior Conditions

Generally, the envelope of the building masonry was found to be in fair condition. We found several areas where moisture is causing damage to the brick, usually at windows, that would need further investigation to determine the source and repair. Some roof materials are at the end of their life and would need replacement in the near future. The metal siding on the gym is also at the end of its life. There are several sections of the building that do not have gutters, which is causing moisture issues at the base of the building.

The existing walls at the cafeteria and gym are single-wythe concrete masonry and do not have insulation, which results in high heating and cooling loads. We also observed that the vast majority of existing windows are non-insulated single-pane glazing, which also result in high energy consumption versus modern double-pane glazing.

Mechanical

The existing 25-year-old boiler room, serving all of the site, is located in the 1973 building on the first level. A new heating plant comprised of two condensing heating water boilers (one boiler for backup) should replace the existing steam boiler. All steam infrastructure should be removed. Steam is an obsolete and fuel inefficient source of heating for schools. The existing steam infrastructure is past its service life and should be removed.

The 1960 and 1973 wings and the 1848 building should be served by new dedicated outside air RTUs with energy recovery. A fan coil system using chilled water and heating water, or a VRF fan coil system, should be retrofitted to these areas.

Heating, cooling, and ventilation for the cafeteria / gym should be provided by RTUs with energy recovery. All three functions are integral to these RTUs.

Electrical

Due to the age and condition of the existing electrical service, it should be replaced with a new 208/120V, 3ø, 4-wire 800-amp distribution panel with a surge protection device and appropriate quantity and rating of breakers. Additional branch panels may need to be replaced one-for-one to update branch circuit grounding requirements and allow for additional breaker space.

In several classrooms there are charging stations for student laptops. More power and receptacles should be added in these areas to accommodate for charging station needs.

Lighting

Fluorescent lighting should be replaced with new LED lighting and update lighting controls with occupancy sensors where code allows. Emergency lighting should be added where indicated on the electrical plans to meet the one foot-candle average per NFPA 101.

Telecommunications

Due to the age of the existing access control system, an upgraded access control system would ensure exterior doors are monitored and secured. The security camera system should be upgraded to a modern IP based NVR (network video recorder) system. A synchronized clock system is also recommended. Exposed cabling should be cleaned up to minimize accidents.

Fire Alarm

The current Simplex zoned system should be replaced with a new addressable system with voice capability to satisfy code requirements. Full detection would be required.

Some specific areas of concern addressed included, but not limited to, the following:

Code Compliance

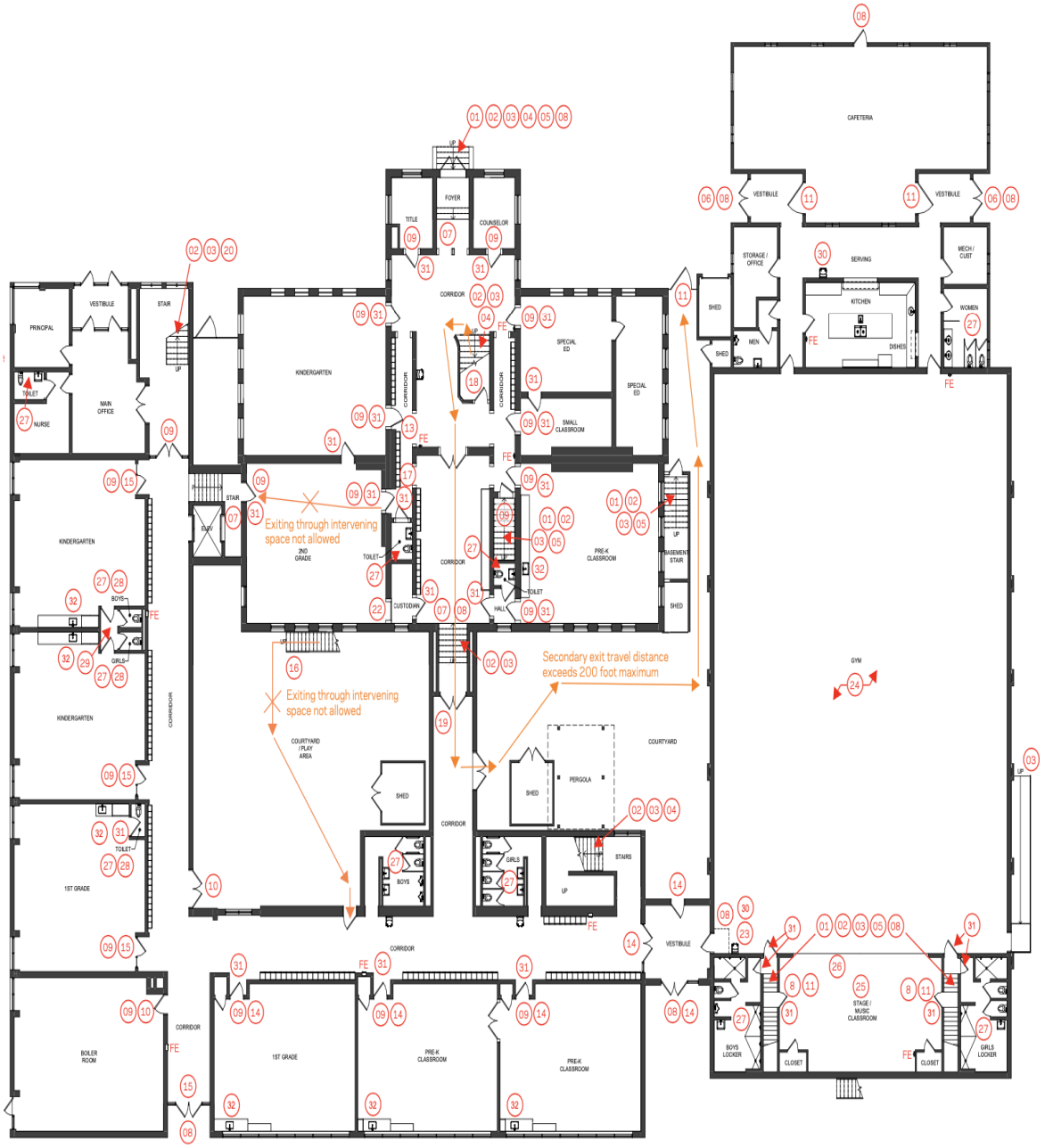
- Stairs
- Corridors and Pathways
- Doors and Ramps
- Fire Prevention
- Materials
- Plumbing Fixtures

Code Compliance

The following pages are a summary of the code deficiencies noted during our assessment of the first and second floor.

01. Non-compliant stair rise or run (2015 IBC)
02. Non-compliant handrail (2015 IBC)
03. Non-compliant or non-existent handrail extensions (2015 IBC)
04. Non-compliant guardrail (2015 IBC)
05. Non-compliant stair landing (2015 IBC)
06. Non-compliant ramp (2015 IBC)
07. Non-compliant area of refuge for persons with mobility impairments during a fire (2015 IBC)
08. Non-accessible exit (2015 IBC)
09. Door and/or window not properly fire-rated (2015 IBC)
10. Door swings in wrong direction for egress (2015 IBC)
11. Non-compliant door egress or access hardware (2015 IBC)
12. Door width non-compliant (2015 IBC)
13. Door swing reduces width of corridor / opening by more than 50% (2015 IBC)
14. Glass not tempered (2015 IBC)
15. Wire glass not allowed (2015 IBC)
16. Egress into enclosed courtyard not allowed (2015 IBC)
17. Exit corridor width less than code allows (2015 IBC)
18. No fire separation between basement and upper levels (2015 IBC)
19. Improperly labeled exits (2015 IBC)
20. Open stair risers not allowed (2015 IBC)
21. Exit corridor space being used as library storage
22. Remove abandoned door and replace with fire-rated wall assembly (2015 IBC)
23. Object impedes clear egress space (2015 IBC)
24. Gaps in structural fireproofing (2015 IBC)
25. Music classroom not wheelchair accessible (ICC 117.1)
26. Stage curtain not fire-rated (2015 IBC)
27. Non-accessible restroom (ICC 117.1)
28. Non-compliant door swing into toilet room (2015 IPC)
29. Non-accessible hallway (ICC 117.1)
30. Non-accessible drinking fountain (ICC 117.1)
31. Non-accessible door clearance (ICC 117.1)
32. Non-accessible sink (ICC 117.1)
33. S-1 storage space required to have fire-rated walls, doors, and floor below (IBC 2015)

Code Compliance Plan - First Floor



Code Compliance Plan - Second Floor

ADA Compliance

1848 Building

- Entry
- Fire/Safety
- Elevator
- Doors
- Wall-Mounted Devices
- Stairs
- Fire/Safety
- Restrooms
- Drinking Fountains

1949 Gym and 1962 Cafeteria

- Entry Areas
- Flooring
- Serving Area
- Drinking Fountains
- Restrooms
- Plumbing

1960 and 1973 Classroom Wings

- Stairways
- Classroom Doors and Door Movement
- Restrooms
- Hallways
- Cabinets
- Counters
- Plumbing

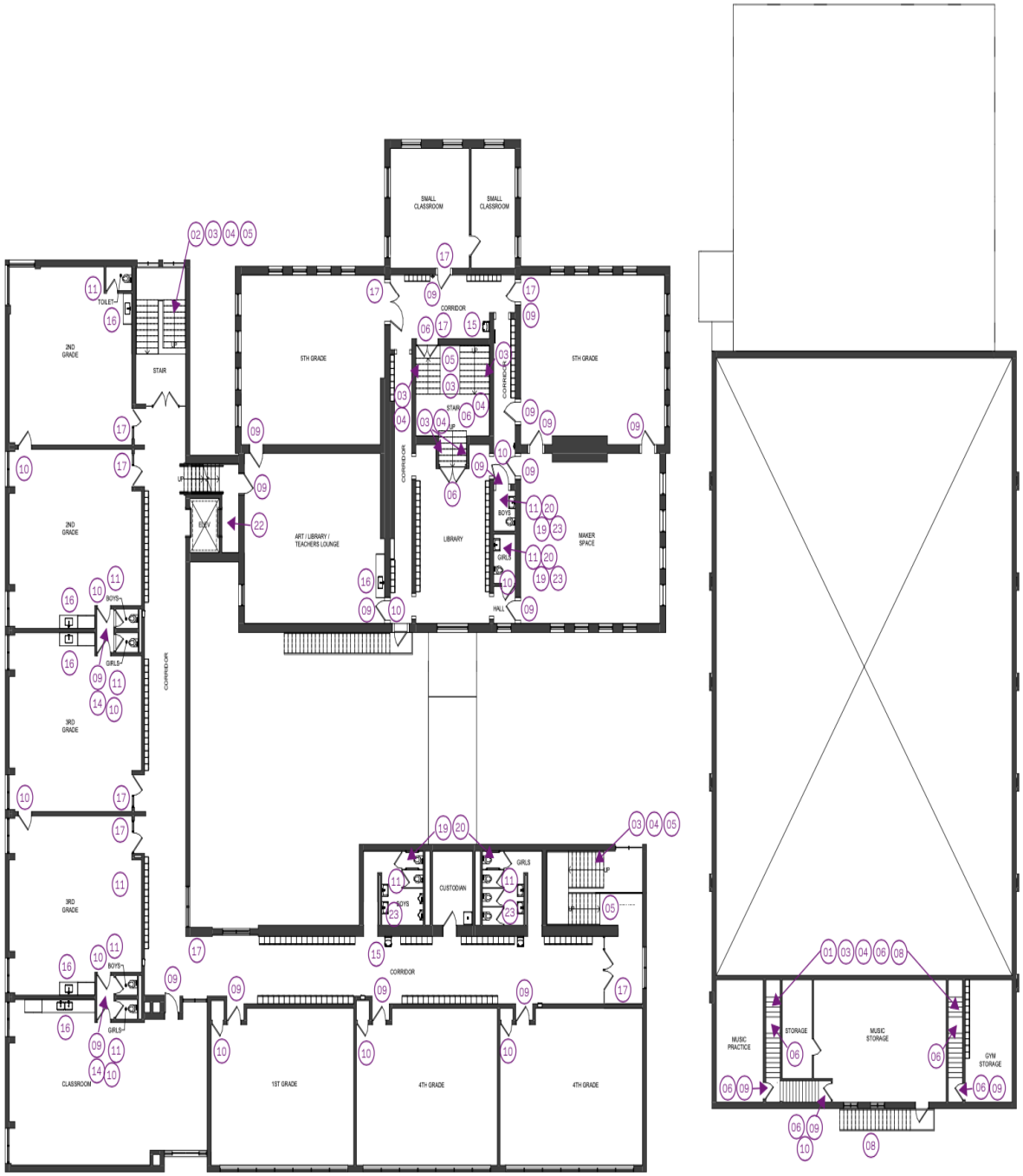
ADA Compliance

The following pages are a summary of ADA accessibility deficiencies noted during our assessment of first and second floor.

01. Non-compliant stair rise or run
02. Non-compliant stair risers
03. Non-compliant handrail
04. Non-compliant or non-existent handrail extensions
05. Non-compliant guardrail
06. Non-compliant stair landing
07. Non-accessible ramp
08. Non-accessible exit
09. Non-accessible door clearance
10. Non-accessible door hardware
11. Non-accessible restroom
12. Object protrudes greater than 4 inches into accessible route
13. Classroom space is not wheelchair accessible
14. Corridor / hallway does not have accessible clearances
15. Non-accessible drinking fountain
16. Non-accessible sink / cabinet
17. Wall device mounted higher than allowed for accessibility
18. Non-accessible counter / transaction surface
19. Missing or non-compliant toilet grab bars
20. Toilet clear space not compliant for accessibility
21. Change in elevation / step exceeds 1/4" - not an accessible doorway
22. Elevator landing does not have required turning radius
23. No protective shroud at sinks

ADA Compliance — First Floor

ADA Compliance — Second Floor



Exterior Conditions

1848 Building
- Single-Pane Windows
- Non-Tempered Glass
- Gutters
- Mold/Mildew

1949 Gym
- Aluminum Siding
- Gutters
- Mold/Mildew
- Single-Pane Windows
- Roofing (Age)
- Fire Escape
- Handrail - Non-Compliant
- Heating and Cooling Issues

1962 Cafeteria Addition
- Single-Pane Windows
- Wall Insulation
- Heating and Cooling Issues
- Doors and Entry Areas

1960 Classroom Wing
- Water Intrusion into the Brick Walls
- Windows
- Roofing (Age)

1973 Classroom Wing
- Water Intrusion into the Brick Walls
- Windows - Mold/Mildew - Water Damage

Exterior Conditions

The following pages are a summary of exterior envelope deficiencies noted during our assessment of first and second floor.

01. Single-pane, non-insulated windows

02. Single-pane, non-insulated and non-tempered door glass

03. Non-insulated hollow metal door

04. Brick moisture issues / efflorescence

05. Mold / mildew growth on wall due to lack of gutters

06. Limestone spalling

07. Rust / corrosion on structural lintels

08. Cracking foundation

09. Crack in exterior wall

10. Metal siding in poor condition / no insulation

11. Exit stair in poor condition / rust

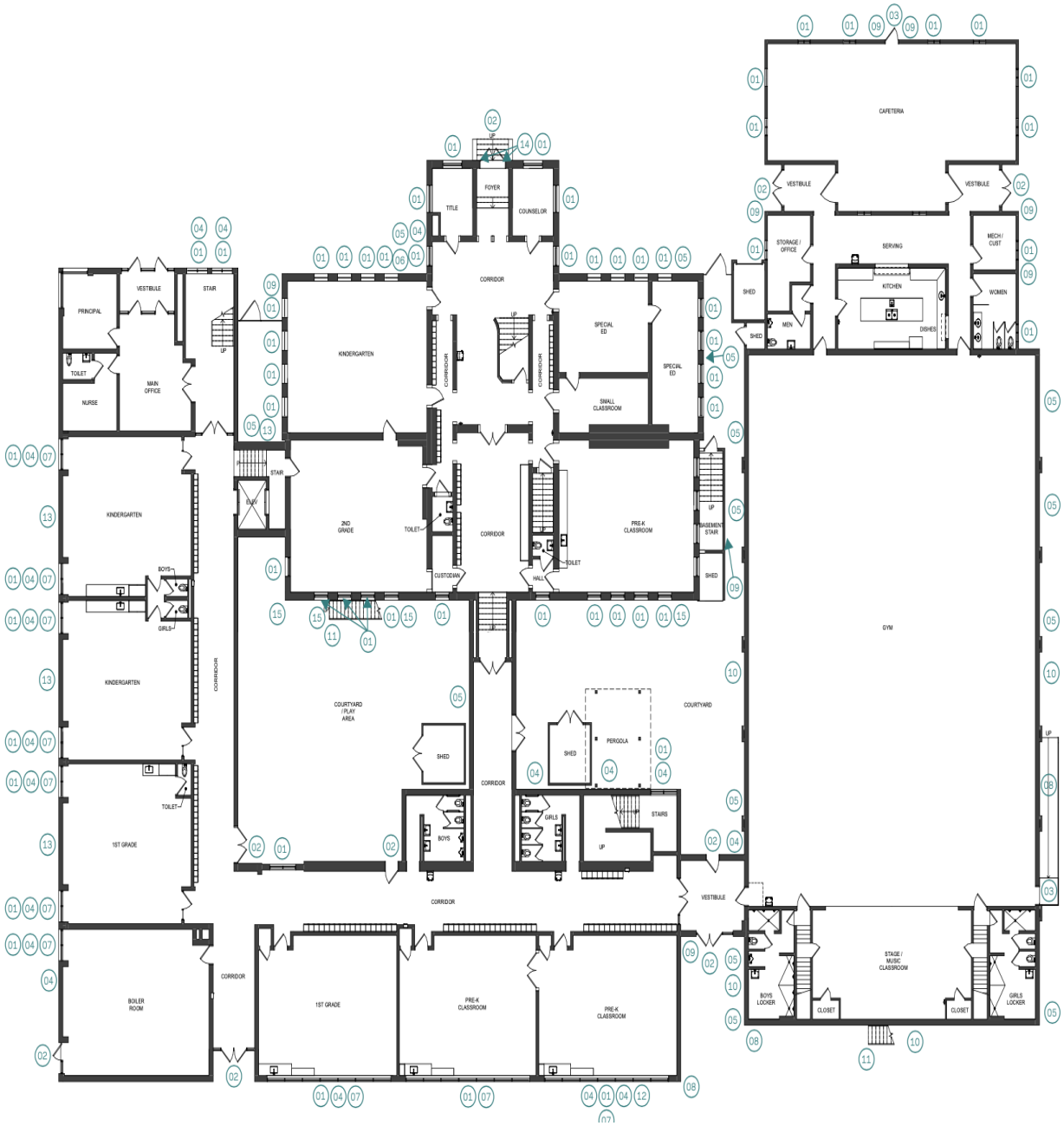
12. Damaged window sill / exposed wall cavity

13. Damaged mechanical louvers

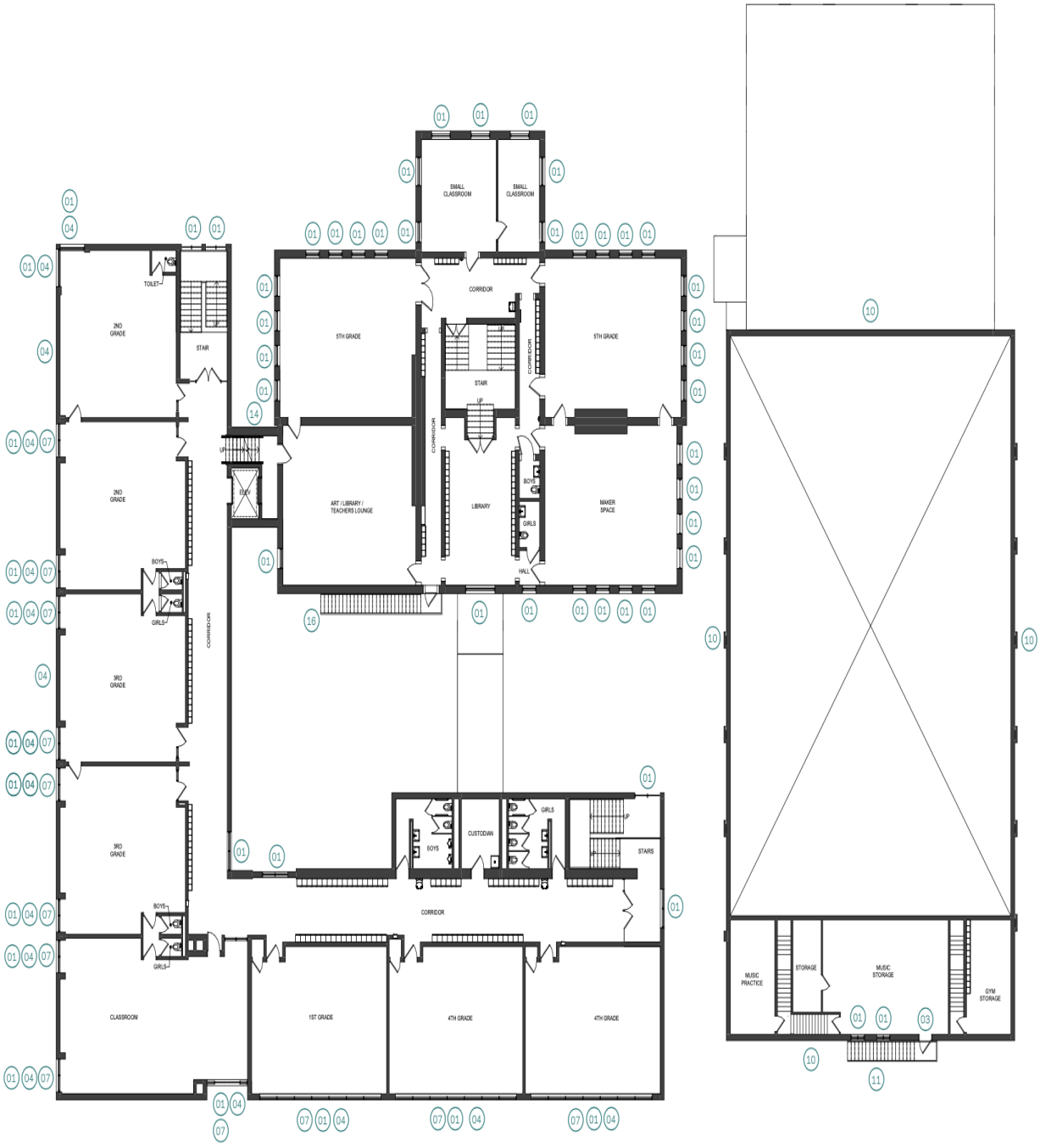
14. Paint flaking off wood jambs

15. Parge coating at base of wall failing

Exterior Conditions - First Floor Plan



Exterior Conditions - Second Floor Plan



Mechanical Code Compliance and Systems Condition

Plumbing
- Outdated Fixtures
- Venting
- Water Coolers - Non-Compliant
- Water Heater Location
- Grease Trap in Cafeteria Area

Heating, Cooling, and Ventilation
- Exhaust Systems
- Ventilation Throughout the Building
- HVAC Controls
- Boiler Age and Efficiency
- Steam Piping Insulation
- Cooling Units

Electrical Code Compliance and Systems Condition

Electrical
- Main Distribution Board - Age and Lack of Replacement Parts
- Panelboards

Lighting
- Emergency Lighting
- Flourescent Lighting

Telecommunications
- Access Control System
- Cabling

Fire Alarm
- Fire Alarm System

Electrical Code Compliance
- GFCI Protection Concerns
- Tamper-Resistant Receptacles
- Boiler Emergency Shut-Off
- Emergency Lighting and Exit Signs
- Fire Alarm - Lack of Voice Activation
- Pull Stations - Height Requirements

As a result of discussions, we may want to consider the following future work in some realm as we prepare for the future of the district and the building:

1. How do we reach out to the community in regard to this report? A community meeting is the likely pathway. Does this meeting include a discussion about "schools" in Bellevue and education as a whole?
    a. Partnerships
2. Getting estimates on a new building in comparison to a renovation.
3. Long-Term Plan (Master Planning) for Facilities and having a professional group assist us with this.

There are other things as well, but both of these (and other things) will cost the district money to accomplish. It will also lead to a better understanding of the "bigger picture" possibly and involve the community more as well to a point.

Where are we at in regard to a bond referendum and timing?
- Even Years - 2022: March 1, 2022; September 13, 2022
- Odd Years - 2023: March 7, 2023; September 12, 2023; November 7, 2023