

FACILITY OBSERVATION REPORT

AUGUST 20, 2023

WASHINGTON ELEMENTARY

TENDOY ELEMENTARY

EDAHOW ELEMENTARY

HIGHLAND HIGH SCHOOL

THINK LEARN BE
MORE
TOGETHER
POCATELLO/CHUBBUCK
SCHOOL DISTRICT 25

design west | architects

August 14, 2023

Pocatello-Chubbuck School District 25
3115 Pole Line Road
Pocatello, Idaho 83201

FACILITY OBSERVATION REPORT FOR FOUR SPECIFIED SCHOOLS

Washington Elementary -	1920
Tendoy Elementary -	1959
Edahow Elementary -	1965
Highland High School -	1962

The Design West design team was asked by the Pocatello-Chubbuck school district to complete an observation level evaluation of the school conditions for the four listed facilities.

The team visited the four schools on August 2nd with school district representatives to preform walk-throughs of each school to access observable conditions of the facilities and provide summaries of findings for use by the district in long term decisions regarding the disposition of the four schools.

The on-site observations were limited to elements and systems visible without any selective demolition of existing finishes. All observations and recommendations noted in the body of the report are strictly based on limited observation and professional judgement.

Executive Summary

The four schools observed were built and renovated as early as 1920 and as late as the 1990's. The schools in general are well maintained and have received numerous system upgrades over the years to increase efficiency and accommodate technological advancements.

The facilities are old and will likely continue to require upgrades and improvements to maintain systems. These costs will be higher than the costs to maintain a newer building but are unlikely to reach the cost of building a new facility anytime soon. Obviously, there are educational, health, safety and operational advantages to building a new school, funds permitting.

Older school facilities require regular upkeep and upgrades to improve the four needs of educational facilities:

Improve physical and safety conditions.

Enhance the educational environment.

Provide updated technological infrastructure.

Increase accessibility of facilities for disability access.

Some of these goals can be extremely costly and, in some cases, impossible to reach with existing building structural constraints. Improving the structural safety of a school the age of Washington would be cost prohibitive. The other schools being newer could more easily receive structural upgrades to increase structural safety at a lower cost.

All of the schools that are going to be maintained in operation could benefit from some level of seismic upgrades to increase safety. The older the facility the lower the level of safety in a seismic event.

Most of the schools have received system and technology upgrades in an effort to maintain the teaching capacity of the school. This represents a substantial investment in the existing school. These upgrades are improvements but bring with them compromises due to the difficulty of introducing newer systems into the structure of older facilities.

Remodel efforts to enhance the aesthetic environment is another way to improve the educational experience. Of the four facilities, the environment of the High School is probably the most lacking in a vibrant, engaging educational experience. An older school can be transformed into a vibrant, lively, efficient place of learning with color and finish upgrades.

Recent studies have shown that adequate lighting and daylight can increase student achievement. Windows in older buildings that were boarded up in the '70s in the name of energy efficiency took what used to be bright, naturally lit, albeit drafty, classrooms and reduced them to dark spaces with no change in the electric lighting. Providing adequate windows that are energy-efficient and help reduce reliance on electric light may improve academics while reducing costs.

The observation report does not make recommendations between replacement of the facilities or remodeling the existing facilities. The decision to renovate or build new is a complex one. There are many ways to analyze the topic based on budgets, finances, student needs and even the emotional connection between the community and the building, all can be equally important.

There is no one solution that will be right for every situation, but it is helpful to break down the details of the facility. Hopefully the information in this observation report will be helpful in considering the options for replacement and/or remodel for the facilities included in the evaluation.

Washington Elementary

General Conditions

Washington Elementary is a three-story school that was built 1920. It is approximately 27,000 square feet of classroom, gymnasium administrative and auxiliary spaces. The facility has undergone two additions to the original 1920 school building. A classroom addition was added in the 50's and a small gymnasium kitchen nook was added in the 70's.

Despite the age of the building, it is very well cared for and has obviously benefited over the years from a staff that takes pride in the school and takes quality care in maintaining it.

The classrooms seem to be adequate to present teaching needs. Most of the classrooms have several computers but suffer from a lack of adequate outlets. Upgrades over the years have provided additional power and monitoring systems using surface mounted raceways which can limit use options and create a chaotic environment.

The school as presently configured is not ADA accessible. The various levels in the school, the access to the school from the exterior, the restroom facilities and general access paths are not ADA compliant which can result in costly lawsuits.



Observed conditions

Multi-purpose Room

The gymnasium addition is quite small, however, given the number of students attending the neighborhood school it may be adequate. As with the majority of the school, it is clean and well maintained. The gymnasium does not have an accessible means of approach from the interior of the school.

The gymnasium has no daylighting creating a less desirable learning space.

The Gymnasium is potentially a loud environment due to the lack of soft surfaces. The walls and the floor are all hard noise reflective surfaces. Additional sound absorptive materials could be added to the wall surfaces to reduce noise levels.

There is no impact protection on the Gymnasium walls.

Kitchen

The kitchen is a small prep kitchen that is probably adequate to the needs of the school. Several plumbing upgrades have been provided over the years including a new grease trap. The age of the infrastructure serving the small kitchen will continue to be problematic given the age of the school.

Administration

The administration is small and includes one reception area with capacity for one possible two. The only other administration area is the principal's office. The administration area has good visual control of the main hallway but does not have any control of the main entry to the school presenting a major security risk.

Restrooms

The restrooms are clean and very well maintained. The restrooms have obviously been upgraded over the years but due to space constraints of the original construction none of the restrooms are fully ADA compliant.

Media Center

The Media Center is small and has limited if any support spaces or gathering spaces that can be used for classes or small groups. The space is well maintained but as with spaces in the school the casework is old and probably requires constant upkeep and repair.

Building Envelope

Most of the classrooms are located along a single main corridor providing daylight. The window sizes were typically reduced during the energy crises in the 80's and so the views and amount of daylighting are severely limited.

The age of the building results in a great deal of atmospheric exchange from outside to inside affecting the efficiency of the mechanical systems and increasing the energy demands of the same.

Doors

The exterior doors and hardware are old and require upgrade in several places. The door hardware is not ADA compliant in many locations.

Windows

The facility windows are largely single-pane and due to age probably leak a large amount of air between the inside and outside short circuiting the efforts of the mechanical system.

Roofing

The roofing system is a flat single-ply membrane that if maintained and replaced when needed will serve well. Connection of the membrane to the perimeter wall needs to be checked regularly for expansion leaks and deteriorated flashings.

Access

The building exterior is not ADA compliant, the height of the main floor above the surrounding grade would require a very lengthy access ramp to improve the access from the exterior. Once inside the building there is no elevator connecting the three levels of the facility.

Interior

The interior finishes are in good condition considering the age of the facility. The bathrooms have been upgraded over the years but are not ADA compliant. There is limited visual control from inside the facility to the exterior playground area.

Due to the age of the facility, it is likely that there may be ceiling, wall or floor tiles that include some level of asbestos. If the district does not have an asbestos survey for the school one would be required to identify potential asbestos products.

The school does not have vestibules at the building entrances to reduce the inside-outside air exchange within the facility to reduce energy costs.

The design includes dead-end corridors which can be dangerous in the event of an evacuation emergency.

Support Spaces

The Teachers' Lounge and Work Rooms are extremely small and potential inadequate to the needs of the staff.

There is limited storage space for the school.

Sustainability

The exterior wall systems are not furred out with insulation and would not meet design guidelines of current energy code requirements. The doors and windows are both insulated glass and non-insulated glass which would not meet current energy code requirements.

Most of the exterior building envelope would need to be furred out or otherwise insulated to comply with the current energy code with doors and windows that do not meet code being replace. This work would create a substantial cost savings for the district but due to the age of the building would not be 100% effective and would further reduce the size of the existing small classrooms.

Code Compliance and ADA compliance

Most of the entrances appear to be non-accessible. The main entrance to the school does not have an accessible ramp. Due to the height of the entrance a ramp would take up a large portion of the school's front yard. Many of the exit paths of the school interior are non-ADA compliant due to door swing clearances and other issues. These issues are not easily resolved due to the present configuration of the building.

The door hardware is mixed as some of the hardware is compliant while others are not.

Security

The building has been upgraded to include card access control for the school. Entry visual control is not available due to the location of the Administration Area away from the Main Entry to the school.

A camera link between the office and the entrance with a securable vestibule could be added to the main entry to increase safety. This is not as effective as direct visual control obviously but does represent an improvement in safety.

See structural, Mechanical/plumbing and electrical for additional observations.



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August 11, 2023

WASHINGTON ELEMENTARY SCHOOL MECHANICAL EVALUATION

The school has a steam boiler. Steam and condensate pipes loop the basement perimeter walls. The steam piping has risers that rise up in the classrooms to the 1st and 2nd levels. The steam feeds the classroom fan coils and wall radiator throughout the school. The school also has a 15-ton rooftop unit on the roof for air conditioning the 2nd level classrooms. Two years ago, individual mini splits were added in classrooms in the basement and 1st level to help air condition the rooms. There is a fresh air fan in the basement with a steam heating coil. This fan just blows air into a plenum with vertical and horizontal chases that supplies air to each classroom. There are no balancing dampers to control the fresh air in each classroom.

The domestic water pipes are galvanized. As the galvanized piping has failed, copper or PEX piping has been installed to fix the leaking. The building Automated Logic Controls are not able to keep the building temperature comfortable year-round because of the building lacking insulation and vapor barrier to stop infiltration.

All the above HVAC systems are not able to heat and cool the classrooms to a comfortable climate for student learning. Steam heating is hard to control. Steam boilers were a great heating system 76 years ago, but today current school classrooms need an environment that is conducive to learning. The HVAC systems are failing to provide this healthy environment due to the building envelope. For this reason, the building HVAC system needs to be totally demo'd and a new HVAC system designed and sized for the building's existing envelope.

Aug 8, 2023

Pocatello-Chubbuck School District 25
3115 Pole Line Rd
Pocatello, ID 83201

Re: Washington Elementary Structural Evaluation
226 S. 10th Ave, Pocatello, ID
#23913.a

ARW Engineers has completed a limited on-site visual structural review and an as-built drawing review of the existing Washington Elementary school building located at 226 S. 10th Ave, Pocatello, ID. The visit was completed on Wednesday, August 2nd, 2023, with school district representatives and other members of the architectural and engineering design team present. The purpose of the review was to provide feedback to the school district regarding the current condition of the facility. The on-site review was limited to elements visible without any destructive removal of finish materials that may obscure structural elements. Exterior building elements were visually observed. Where possible framing was reviewed by removing ceiling tiles, but most of the facility had hard ceilings/finishes limiting what could be seen. An analysis to determine the gravity or lateral load carrying capacities of the structural elements was not within the scope of this review and not performed. All observations and items noted in this report are strictly based on limited visual observation and engineering judgement.

Building Description and Structural System

Washington Elementary is a 3-story school originally constructed in 1920. The first and second floors are constructed with tongue and groove (T&G) decking spanning over 2x16 joists as well as cast-in-place concrete slabs in the corridors. The 2x16 joists are inserted into bearing pockets in the unreinforced masonry walls. The roof is constructed of wood trusses and various wood joists with T&G decking and possibly a plywood sheathing overlay that was installed during a re-roofing project. The trusses or joists span between masonry bearing walls and concrete beams and columns near the center of the building. The perimeter walls of the original building consist of 13" multi-wythe unreinforced masonry including a 4" exterior brick veneer. The walls and columns are supported on concrete foundations and footings. All masonry is considered unreinforced, and all concrete is considered moderately reinforced.

Additions on each end of the original school were constructed in 1947 and match the original construction of the school. A single-story gym addition was later built in 1974 on the far end of the building that is constructed of 8" reinforced masonry walls that support a roof structure of T&G open web joists with plywood sheathing. The addition is supported on concrete foundations and footings.

Observations and Evaluation of Building

Limited visual observations indicated that the structural gravity systems are performing adequately but signs of deterioration and building age are evident. The majority of the structural elements could not be seen due to architectural finishes, but the following items were noted:

- Exterior brick and mortar are in need of repair, particularly at parapet locations. (It was noted by the school district representatives that an existing chimney had been removed recently because of extensive damage at that location.)
- Some splitting, cracking and separation of wood roof framing members was observed at the roof.

The items noted were visible and observed at the time of the visit. There may be other issues that could not be observed without removal of finish materials.

In addition to the visual observations, ARW Engineers did a limited review of the as-built drawings provided by the owner. Due to the age of the structure the as-builts contained limited information but using what information was provided, and an understanding of construction and design practices of the period, the following items were noted:

- Information was not provided indicating what the design snow load of the original building was, but the 1974 addition indicated 30 psf with no additional loads to account for snow drifting adjacent to the 3-story building. Currently the roof design snow load in Pocatello is 35 psf. The roof framing may be undersized and become overstressed during a significant snow event.
- Exterior masonry walls are unreinforced and likely lack sufficient strength to resist out-of-plane and in-plane forces during a seismic event.
- Exterior masonry walls are not adequately anchored to the floor and roof diaphragms. In a seismic event the roof and floor diaphragms will not be able to transfer seismic forces into the walls and down into the foundation. The walls will also likely separate from the building and collapse during a seismic event.
- Floor and roof diaphragms are likely inadequate to resist lateral forces during a seismic event.
- Interior heavy partition walls likely aren't braced and could be a life safety hazard during a seismic event.

Other building deficiencies are likely present and would be identified in a more detailed analysis and review of the building. If the school district wants a more in-depth understanding of the building deficiencies, an ASCE 41 Tier 1 evaluation would be recommended. Additionally, a deficiency-based Tier 2 analysis could be conducted to determine potential upgrades.

Conclusion and Recommendations

The majority of Wasatch Elementary school is close to 80 years old with the original portion of the school over 100 years old. Evidence of the schools age was seen in some deterioration of the brick-and-mortar construction along with the condition of wood framing members in the roof. A more detailed evaluation of the wood roof framing members is recommended to determine the extent of the conditions noted to see if potential repairs and upgrades are required. It is also recommended this analysis review the snow load capacity of the existing roof framing to determine the roofs ability to resist current snow load requirements. Repair of the exterior masonry is also recommended to limit continuing deterioration and water damage.

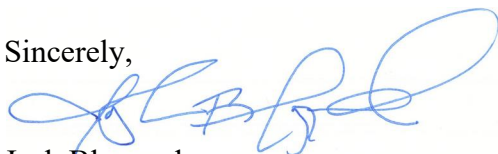
The school was also constructed prior to advancements in earthquake design and detailing. Unreinforced masonry buildings such as this school have proven to perform poorly in seismic events with most buildings experiencing extensive damage and partial collapse. Replacing or seismically retrofitting the building would be recommended for the safety of the occupants of the building.

Disclaimer

The information provided in this report is for the intended use of the architect and school district and is not a comprehensive structural review, evaluation, or analysis of the structural systems and elements at the building location indicated above. It should be understood that this review was not exhaustive, and as

additional information becomes available the conclusions and recommendations contained in this report may need to be re-evaluated and amended. Should additional assessment or information be desired, ARW Engineers would be pleased to provide that information. Please contact us if there are any questions.

Sincerely,



Josh Blazzard



Robert Moyle, SE

23913.A_Washington Elementary Report_20230807

Tendoy Elementary

General Conditions

Tendoy Elementary is a one-story school that was built in 1959. It is approximately 22,000 square feet of classroom, gymnasium administrative and auxiliary spaces. The facility has undergone two additions to the original 1959 school building. Classroom/Gymnasium additions were added circa 1988.

Despite the age of the building, it is very well cared for and has obviously benefited over the years from a staff that takes pride in the school and takes quality in maintaining it.

The classrooms seem to be adequate to present teaching needs. Most of the classrooms have several computers but suffer from a lack of adequate outlets. Upgrades over the years have provided additional power and monitoring systems using surface mounted raceways which can limit use options and create a chaotic environment.

Most of the classrooms are located along a single main corridor, as such these classrooms have windows for daylight. The window sizes were typically reduced during the energy crises in the 80's and so the views and amount of daylighting are limited.



Observed conditions

Multi-purpose Room

The gymnasium addition is quite small, however given the number of students attending the neighborhood school it may be adequate. As with the majority of the school, it is clean and well maintained.

The gymnasium has no daylighting creating a less desirable learning space.

The Gymnasium is potentially a loud environment due to the lack of soft surfaces. The walls and the floor are all hard noise reflective surfaces. Additional sound absorptive materials could be added to the wall surfaces to reduce noise levels.

There is no impact protection on the gymnasium walls.

Kitchen

The kitchen is a small prep kitchen that is probably adequate to the needs of the school. There is no direct service interface with the Gymnasium which may complicate delivery of the food items to the children. We would be interested in looking at this operationally with the staff.

Administration

The administration is small and includes one reception area with capacity for one possible two. The only other administration area is the principal's office and a counselor's office. The Administration area does not have good visual control of the main entry. The school does have a camera monitored access control at the main entry which if used properly can be a great safety asset.

Restrooms

The restrooms are clean and very well maintained. The restrooms have obviously been upgraded over the years but due to space constraints of the original construction none of the restrooms are fully ADA compliant.

Media Center

The Media Center is small and has limited if any support spaces or gathering spaces that can be used for classes or small groups. The space is well maintained but as with spaces in the school the casework is old and probably requires constant upkeep and repair.

Building Envelope

The building exterior is well maintained and appears to be in reasonable condition considering the age of the facility.

Doors

The exterior doors and hardware are old and require upgrade in several places. The door hardware is not ADA compliant in some locations.

Windows

The facility windows are largely dual-pane and appear to be well sealed preserving a good separation between inside-outside environments.

Roofing

The roofing system is a sloped single-ply membrane that if maintained and replaced when needed will serve well. The gutter system and flashing system integrated into the roof membranes is in good shape.

There is no evidence of major roof leak issues.

Interior

The interior finishes are in good condition considering the age of the facility. The bathrooms have been upgraded over the years but are not ADA compliant.

The school does have several vestibules at the building entrances reducing the inside-outside air exchange within the facility to reduce energy costs.

Wire glass is found in some of the interior doors. This can be a dangerous material in an impact situation and should be replaced to reduce liability. Wired glass is not safety glass. The wire mesh simply holds the glass in place during a fire. The product is actually quite weak and breaks more easily. It is also more dangerous when broken, causing extensive injuries because of the jagged break patterns and protruding wire.

The majority of the casework in the school is old and requires refurbishing or replacement to reduce maintenance problems.

Technology and power upgrades over the years have resulted in numerous surface mounted raceways to distribute new systems. These are effective but bring with them an aesthetic chaos to the room.

Support Spaces

The Teacher's Lounge and Work Rooms are extremely small and potentially inadequate to the needs of the staff. There is no designated Teacher Work area other than a corner of the Teacher's Lounge space.

There is limited storage space for the school.

The Janitorial spaces are small based on needs.

Sustainability

The exterior wall systems are not furred out with insulation and would likely not meet all of the design guidelines of current energy code requirements. The doors and windows are mostly insulated glass which does help move towards current energy code requirements.

Due to the age of the building the building envelope probably has some energy saving limitations but nothing outstanding was noticed in the observation beyond what would be acceptable in a facility this age.

Code Compliance and ADA compliance

The door hardware in the facility is not fully ADA compliant.

The doors swing into the corridors which can be a safety issue.

Access into the school is ADA compliant in general since the one-story school is built at grade.

There is an interior ramp joining the administration area to the higher classroom wing. It is not obvious if this ramp is ADA compliant or not.

Security

The building has been upgraded to include card access control for the school. Direct Entry control is not available due to the location of the Administration Area separated from the Main Entry to the school.

See structural, Mechanical/plumbing and electrical for additional observations.



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August 11, 2023

TENDOY ELEMENTARY SCHOOL MECHANICAL EVALUATION

In 2005 the school changed the original HVAC system from steam unit ventilation to a 40-ton VAV AAON rooftop unit with hot water reheat VAV boxes. The AAON rooftop supplies air to all the classrooms. The VAV boxes heating coils have been leaking due to pipe expansion and are being replaced as the heating coils break. Two 5-ton rooftop units serve the multipurpose room. The VAV box hot water coils are fed from the boiler and pumps in the basement. The boiler was just repaired. The building has Automated Logic Controls which control the AAON unit, the two rooftop units, VAV boxes, boiler, and pumps on and off. Fresh air is controlled through the rooftop unit economizer dampers.

The domestic water piping is underground which is a problem for servicing. The VAV system and rooftop units can meet the fresh air code requirement of maximum 1,000 PPM CO². The mechanical system for this school is okay. The rooftop units and VAV boxes will need to be replaced as they reach the 20-to-25-year mark.

Aug 8, 2023

Pocatello-Chubbuck School District 25
3115 Pole Line Rd
Pocatello, ID 83201

Re: Tendoy Elementary Structural Evaluation
957 E. Almeda, Pocatello, ID
#23913.a

ARW Engineers has completed a limited on-site visual structural review and an as-built drawing review of the existing Tendoy Elementary school building located at 957 E. Almeda, Pocatello, ID. The visit was completed on Wednesday, August 2nd, 2023, with school district representatives and other members of the architectural and engineering design team present. The purpose of the review was to provide feedback to the school district regarding the current condition of the facility. The on-site review was limited to elements visible without any destructive removal of finish materials that may obscure structural elements. Exterior building elements were visually observed. Where possible framing was reviewed by removing ceiling tiles, but most of the facility had hard ceilings/finishes limiting what could be seen. An analysis to determine the gravity or lateral load carrying capacities of the structural elements was not within the scope of this review and not performed. All observations and items noted in this report are strictly based on limited visual observation and engineering judgement.

Building Description and Structural System

Tendoy Elementary is a 1-story school built in 1959. The roof is constructed of Glulam beams that were visible in the classrooms and wood trusses that were observed in the corridor. Since no existing as-built structural drawings could be provided it is assumed that tongue and groove (T&G) decking was likely used, but plywood sheathing could potentially be used at the corridors above the trusses. It wasn't clear what the bearing wall construction was, but it appears it could be a mixture of 8" block or even stud framing. The walls likely are supported on concrete foundations and footings.

Based on information provided by the school district representatives, the gym and classroom additions were added to the school approximately 35 years ago. The classroom addition seems to be constructed similar to the original building. The gym addition likely has TJL open web wood joists spanning between 8" reinforced block walls with plywood roof sheathing. It is assumed both additions bear on concrete foundation and footings.

Observations and Evaluation of Building

Limited visual observations indicated that the structural gravity systems appear to be performing adequately with the only visible issues being some water damage in the brick veneer at a few locations around the building. The masonry veneer is not part of the structural system of the building and is just an architectural finish, so the damage doesn't impact the capacity of the structural members.

Most of the structural members were not accessible for observation so there may be other unseen issues that could not be observed beyond what was noted above.

Without access to any as-built drawings, ARW Engineers was not able to do a limited review of those documents. It is assumed that the building was constructed according to typical design and detailing practices of that time period which does a fairly adequate job of addressing typical gravity loads on the structure with the exception of snow and snow drift loads that have been updated periodically. Older

building codes also didn't adequately address wind and seismic detailing requirements found in current codes. Based solely on these assumptions the following are likely items of note on this school:

- The current roof design snow loads could be potentially higher than the loads used during the design of the building. Currently the roof design snow load in Pocatello is 35 psf and there is the possibility that older buildings codes could have allowed for a lower design value. The roof framing may be undersized and become overstressed during a significant snow event.
- The building has various locations where changes in roof elevations occur, particularly adjacent to the gym. Snow drift loading could potentially occur at these locations and may not be accounted for.
- The building roof diaphragm may not be adequate to resist lateral forces during a seismic event.
- Roof diaphragm to shear wall connections may not be adequate to resist lateral forces during a seismic event.
- Heavy non-bearing interior partition walls may need bracing and could be a life safety hazard during a seismic event.

Other building deficiencies could be present and would be identified in a more detailed analysis and review of the building. If the school district wants a more in-depth understanding of the building deficiencies, an ASCE 41 Tier 1 evaluation would be recommended. Additionally, a deficiency-based Tier 2 analysis could be conducted to determine potential upgrades.

Conclusion and Recommendations

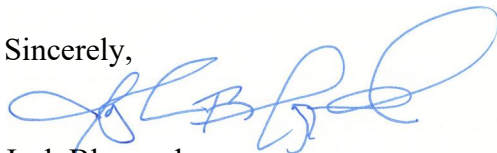
Based on the limited information provided the existing school is performing adequately under gravity loads, but there is the possibility of issues during a significant snow event if the loads exceed the original design snow loads. An analysis and more in-depth review of the roof framing would be recommended to determine the actual roof capacity to resist current snow loading requirements.

During a seismic event it is anticipated the building may experience moderate damage. Upgrades to the roof diaphragm and installing additional anchorage of the roof to the shear walls would significantly improve the performance of the structure during a seismic event.

Disclaimer

The information provided in this report is for the intended use of the architect and school district and is not a comprehensive structural review, evaluation, or analysis of the structural systems and elements at the building location indicated above. It should be understood that this review was not exhaustive, and as additional information becomes available the conclusions and recommendations contained in this report may need to be re-evaluated and amended. Should additional assessment or information be desired, ARW Engineers would be pleased to provide that information. Please contact us if there are any questions.

Sincerely,



Josh Blazzard



Robert Moyle, SE

23913.A_Tendoy Elementary Report_20230807

Edahow Elementary – 1965

General Conditions

Edahow Elementary is a one-story school that was built 1964. It is approximately 27,000 square feet of classroom, gymnasium administrative and auxiliary spaces. In 1975 the two interior open-air courtyards were infilled for a media Center and a Gymnasium.

Despite the age of the building, it is very well cared for and has obviously benefited over the years from a staff that takes pride in the school and takes quality in maintaining it.

The classrooms as a whole seem to be adequate to present teaching needs. Upgrades over the years have provided additional power and monitoring systems using surface mounted raceways which can limit use options and create a chaotic environment.

Most of the classrooms, excepting the courtyard infills, are located along a single corridor, with high ribbon windows for daylight. The window height and sizes limit views and daylight.

The building construction is reinforced cmu at both the interior and exterior walls increasing the long-term durability of the facility but inhibiting the potential for future revisions as needed.



Observed conditions

Multi-purpose Room

The gymnasium addition is quite small, however given the number of students attending the neighborhood school it may be adequate. As with the majority of the school, it is clean and well maintained.

The gymnasium has no daylighting creating a less desirable learning space.

The Gymnasium is potentially a loud environment due to the lack of soft surfaces. The walls and the floor are all hard noise reflective surfaces. Additional sound absorptive materials could be added to the wall surfaces to reduce noise levels.

There is no impact protection on the gymnasium walls.

The ramp from the hallway is probably not ADA accessible.

Kitchen

The kitchen is a small prep kitchen that is probably adequate to the needs of the school. The kitchen is used for preparation only with meals transported from the main kitchen. The space is small with overflow carts equipment stored in the Gymnasium presenting a possible impact danger during Gym activities.

Administration

The administration is small and includes one reception area with capacity for one possible two. The only other administration area is the principal's office. The Administration area does not have good visual control of the main entry.

Restrooms

The restrooms are clean and very well maintained. The restrooms have obviously been upgraded over the years but due to space constraints of the original construction none of the restrooms are fully ADA compliant.

Media Center

The Media Center is small and has limited if any support spaces or gathering spaces that can be used for classes or small groups. The space is well maintained but as with spaces in the school the casework is old and probably requires constant upkeep and repair.

There is no daylight in the Media Center and the ramp from the hallway is probably not ADA accessible.

Building Envelope

The building exterior is well maintained and appears to be in reasonable condition considering the age of the facility.

The exterior brick is staining and deteriorating due to moisture problems from the sprinkler system. The system can be adjusted to limit the amount of water hitting the building to reduce masonry staining and deterioration.

Doors

The exterior doors and hardware are old and require upgrade in several places. The door hardware is not ADA compliant in many locations.

Windows

The facility windows are largely dual-pane and appear to be well sealed preserving a good separation between inside-outside environments. Most of the windows are operable.

Roofing

The roofing system is a sloped single-ply membrane that if maintained and replaced when needed will serve well. The gutter system and flashing system integrated into the roof membranes is in good shape.

There is no evidence of major roof leak issues.

Interior

The interior finishes are in good condition considering the age of the facility. The bathrooms have been upgraded over the years but are not ADA compliant.

The school does not have main entry vestibules which would help reduce the inside-outside air exchange within the facility to reduce energy costs.

The majority of the casework in the school is old and requires refurbishing or replacement to reduce maintenance problems.

Technology and power upgrades over the years have resulted in numerous surface mounted raceways to distribute new systems.

Support Spaces

The Teacher's Lounge and Work Rooms are extremely small and potentially inadequate to the needs of the staff. There is no designated Teacher Work area other than a corner of the Teacher's Lounge space.

There is limited storage space for the school.

The Janitorial spaces are small based on needs.

Sustainability

The exterior wall systems are not furred out with insulation and would likely not meet all of the design guidelines of current energy code requirements. The doors and windows are mostly insulated glass which does help move towards current energy code requirements.

Due to the age of the building the building envelope probably has some energy saving limitations but nothing outstanding was noticed in the observation beyond what would be acceptable in a facility this age.

Code Compliance and ADA compliance

The door hardware in the facility is not fully ADA compliant.

The doors swing into the corridors which can be a safety issue.

Access into the school is ADA compliant in general since the one-story school is built at grade.

Security

The building has been upgraded to include card access control for the school. Direct Entry control is not available due to the location of the Administration area separated from the main entry to the school.

See structural, Mechanical/plumbing and electrical for additional observations.



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August 11, 2023

EDAHOW ELEMENTARY SCHOOL MECHANICAL EVALUATION

In 2020 the school demo'd the electric heat in the classrooms and changed to gas/electric rooftops to heat and cool the building. One 5, 6, or 7.5 ton gas/electric rooftop unit serves two classrooms. The library and multipurpose room each have two 5-ton gas/electrical rooftop units. The rooftop economizer can be set for fresh air code. These gas/electric rooftop units adequately heat and cool the building to 70° to 75° F. The domestic piping is galvanized and is under the slab to feed all the plumbing fixtures. The piping is under the slab because the building has a cold attic. The building has Automated Logic Controls to maintain a comfortable environment in the classrooms.

Using the fresh air dampers, the rooftop units fresh air dampers can modulate to meet the ASHRAE code for a maximum 1,000 PPM CO² in a the classroom. The rooftop HVAC systems just need to be replaced as the equipment life nears the 20-to-25-year mark. Since the rooftop units are three years old they do not need to be replaced.

Aug 8, 2023

Pocatello-Chubbuck School District 25
3115 Pole Line Rd
Pocatello, ID 83201

Re: Edahow Elementary Structural Evaluation
2020 Pocatello Creek Rd, Pocatello, ID
#23913.a

ARW Engineers has completed a limited on-site visual structural review and an as-built drawing review of the existing Edahow Elementary school building located at 2020 Pocatello Creek Rd, Pocatello, ID. The visit was completed on Wednesday, August 2nd, 2023, with school district representatives and other members of the architectural and engineering design team present. The purpose of the review was to provide feedback to the school district regarding the current condition of the facility. The on-site review was limited to elements visible without any destructive removal of finish materials that may obscure structural elements. Exterior building elements were visually observed. Where possible framing was reviewed by removing ceiling tiles, but most of the facility had hard ceilings/finishes limiting what could be seen. An analysis to determine the gravity or lateral load carrying capacities of the structural elements was not within the scope of this review and not performed. All observations and items noted in this report are strictly based on limited visual observation and engineering judgement.

Building Description and Structural System

Edahow Elementary is a 1-story school built in 1964. The roof is constructed of Glulam beams with tongue and groove (T&G) decking. The roof is supported on interior and exterior reinforced 8" pumice block walls. The walls are supported on concrete foundations and footings.

In 1975 the two interior open-air courtyards were infilled with roof structures. The new roofs sit approximately 6' to 8' above the existing roof structure and are built out of TJL open web joists with plywood roof sheathing. The roof is supported by wood bearing walls that extend down to the existing masonry walls below.

Observations and Evaluation of Building

Limited visual observations indicated that the structural gravity systems appear to be performing adequately with the only visible issues being some water damage in the brick veneer on the front and back of the building. The masonry veneer is not part of the structural system of the building and is just an architectural finish, so the damage doesn't impact the capacity of the structural members.

Most of the structural members were not accessible for observation so there may be other unseen issues that could not be observed beyond what was noted above.

In addition to the visual observations, ARW Engineers did a limited review of the as-built drawings provided by the owner. The information in the drawings indicate that the building was constructed according to typical design and detailing practices of that time period which does a fairly adequate job of addressing typical gravity loads on the structure with the exception of snow and snow drift loads that have been updated periodically. Older building codes also didn't adequately address wind and seismic detailing requirements found in current codes. These items were noted in our review of the as-built drawings and are outlined below:

- Information is not provided on the drawings indicating what use used for the roof design snow load. Currently the roof design snow load in Pocatello is 35 psf and there is the possibility that older buildings codes could have allowed for a lower design value. The roof framing may be undersized and become overstressed during a significant snow event.
- Snow drift loading could potentially occur around the higher roof structures installed during the 1975 remodel. It is not clear if the existing lower roofs were checked for these additional loads, which was not a common requirement in older building codes.
- The original building roof diaphragm is constructed of tongue and groove decking which may not be adequate to resist lateral forces during a seismic event.
- Roof diaphragm to masonry wall connects may not be adequate to resist lateral forces during a seismic event.
- Non-bearing masonry interior partition walls may need bracing and could be a life safety hazard during a seismic event.

Other building deficiencies could be present and would be identified in a more detailed analysis and review of the building. If the school district wants a more in-depth understanding of the building deficiencies, an ASCE 41 Tier 1 evaluation would be recommended. Additionally, a deficiency-based Tier 2 analysis could be conducted to determine potential upgrades.

Conclusion and Recommendations

Based on the limited information provided the existing school is performing adequately under gravity loads, but there is the possibility of issues during a significant snow event if the loads exceed the original design snow loads. An analysis and more in-depth review of the roof framing would be recommended to determine the actual roof capacity to resist current snow loading requirements.

During a seismic event it is anticipated the building may experience moderate damage. Upgrades to the roof diaphragm and installing additional anchorage of the roof to the masonry walls would significantly improve the performance of the structure during a seismic event.

Disclaimer

The information provided in this report is for the intended use of the architect and school district and is not a comprehensive structural review, evaluation, or analysis of the structural systems and elements at the building location indicated above. It should be understood that this review was not exhaustive, and as additional information becomes available the conclusions and recommendations contained in this report may need to be re-evaluated and amended. Should additional assessment or information be desired, ARW Engineers would be pleased to provide that information. Please contact us if there are any questions.

Sincerely,

Josh Blazzard

Robert Moyle, SE

23913.A_Edahow Elementary Report_20230807

Highland High School – 1962

General Conditions

Highland High school is a single story, multi-level school that was built in 1962 is a one-story school that was built 1959. It is approximately 128,000 square feet off classroom, gymnasium administrative and auxiliary spaces. There have been numerous additions and remodels to the original school, with the most recent being an effort in 1998 to connect all the various wings of the school and add a new gymnasium.

The classrooms as a whole seem to be adequate to present teaching needs. Upgrades over the years have provided additional power and monitoring systems using surface mounted raceways which can limit use options and create a chaotic environment.

The Fire Marshal sprinkler upgrade has resulted in the replacement of most of the corridor ceilings and exposed sprinkler piping in most of the classroom areas.

Due to the size of the facility and the infilling remodels of the various original structures some of the teaching spaces do not have windows and daylighting.



Observed conditions

Auxiliary Gymnasium

The school has a very nice Auxiliary Gym that is in the process of receiving a new wood floor. The gym is built out of sound attenuating CMU block. The sound levels should however be tested in the Gymnasium and additional sound absorbing material added to the walls if the block is not providing adequate absorption of noise levels.

Administration

The administration is adequate in sizes but does not have good control of the entry as presently configured for safety. It is possible that the room layout within the Administration area could be revised to provide better visual connection to the Main Entry enhancing the ability to control entry. Camera and card access system have been installed to improve school safety throughout.

Restrooms

Some of the restrooms are ADA accessible. Some of the smaller restrooms are not. In general, the restrooms require new fixtures and finishes.

Media Center

The Media Center is appropriately sized and has several support spaces that facilitate a wide range of activities desired in the Media Center environ. There is some generous daylighting into the Media Center provided by a roof clerestory spanning the space. Transparency into the Media Center is good from the Commons Area.

Commons

The Commons area is large and serves as a circulation spine between the two major wings of the school. The lockers that were once located in the Commons have been temporarily removed to provide space for a lunchroom function. This is a great space and should be evaluated in the future for enhanced gathering/café space for the student and potentially permanently remove the lockers to another location.

Auditorium

The Auditorium is undersized for the facility. The space could be repurposed for smaller performance space like a black box or other functions like education spaces. Any attempt to enlarge the auditorium would probably prove to be impractical due to structural and mechanical constraints of the existing space. Adding a balcony would like wise be cost prohibitive and ineffective for the same reason.

The design at present is austere, with very old beyond life cycle finishes. Based on the amount of hard surfaces in the Auditorium it could also have negative acoustics for a performance space.

The stage floor is old and needs to be replaced. The Control Booth is makeshift and needs to be upgraded to improve the quality of performances and to provide isolation for the booth.

Building Envelope

The building exterior is reasonably well maintained and appears to be in reasonable condition considering the age of the facility. Exterior metal handrails are rust expanding concrete stairs and walk and should be replaced before further damage is experienced requiring new concrete placement.

The construction of the various building elements are of both load bearing studs and masonry. The masonry portions of the school are holding up better than the stud construction as is always the case.

Doors

The exterior doors and hardware are old and require possible replacement based on the age of specific opening. The hardware in the doors are largely ADA compliant. Some doors have wire glass which should be replaced as a safety measure.

Most of the door frames in the older portions of the building are soft wood, which is not adequate for a busy high school environment. The portions of the building with hollow metal frames (Commons Area/Gymnasium) are standing up much better to the punishing traffic heavy environment.

Windows

The facility windows are largely dual-pane and appear to be well sealed preserving a good separation between inside-outside environments.

Roofing

The roofing system is a combination flat single-ply membrane and sloped standing seam metal roof. No observations of the existing roofing system were included in the walk-thru of the school.

Entries

There are two main entries to the building front. The main entry into the Commons and the secondary public events entry into the Auditorium Antes Space. To create a greater sense of space and school identity both entries could benefit from entrance structures that provide shelter, an exterior gathering zone and a greater street presence for this major civic structure.

Interior

The interiors of the school in general are austere and utility standard. More could be done to create more inspiring learning spaces especially, in the classrooms, using colors, materials and finishes to create a more welcoming and engaging environment.

The interior finishes are worn and not in good shape in many areas of the school.

The bathrooms have been upgraded over the years but are not ADA compliant and the finishes and fixtures have exceeded lifecycle in many areas.

The majority of the entrances to the school have vestibules at the building entrances reducing the inside-outside air exchange within the facility to reduce energy costs.

The majority of the casework in the school is old and requires refurbishing or replacement to reduce maintenance problems.

Technology and power upgrades over the years have resulted in numerous surface mounted raceways to distribute new systems.

There is no elevator to the lower levels of the school. A lift provides access from the main level to higher levels. There is also a ramp that leads from the Commons to the teaching wing which may not be ADA accessible. Lack of compliance to the Americans with Disability Act can expose the district to lawsuits since it is considered a civil right legislation and not simply a code issue. It does appear that the school has tried to provide reasonable accommodation where able.

Some of the older tile finishes in the school may have asbestos structure. If not done an asbestos survey might be advantageous prior to any future remodel/addition work.

Lockers in the B building are in relatively good shape. Lockers in the C building are not in good shape and should be refurbished or replaced. Full height locker could be replaced with half height to increase the locker count.

It is suggested that lockers not be returned to the Commons area. The area is bright and inviting. This area could function well as a Café space for the students. The space has good control by the Administration which is critical in a Café style function.

Support Spaces

The Teacher's Lounge and Work Rooms are small. This area could probably be evaluated for updating based on actual needs and operations the teachers desire for the space.

There is limited storage space for the school. Any additions/remodels should evaluate actual storage needs to limit scattered and inadequate storage presently found throughout the facility.

The Janitorial spaces are small based on needs.

The Counseling Center is a large space with scattered desks. This area needs to be updated to improve privacy level for the personal conversations that take place.

The Science Rooms in the 'C' wing are extremely old with inadequate millwork for a science curriculum.

Many of the whiteboards and bulletin boards in the classroom spaces are very old and should be replaced.

Sustainability

The exterior wall systems are not furred out with insulation and would likely not meet all of the design guidelines of current energy code requirements. The doors and windows are mostly insulated glass which does help move towards current energy code requirements.

Due to the age of the building the building envelope probably has some energy saving limitations but nothing outstanding was noticed in the observation beyond what would be acceptable in a facility this age.

Code Compliance and ADA compliance

The door hardware in the facility is in general ADA compliant with random exceptions.

Access into the school is ADA compliant in general since the one-story school is built at grade. There are some entrances entries that are not compliant. The interior of the facility is not ADA compliant due to the lack of an elevator. The addition of an elevator to provide access to limited basement areas would be cost prohibitive.

Security

The building has been upgraded to include card access control for the school. Direct Entry control is not available due to the location of the Administration Area separated from the Main Entry to the school.

See structural, Mechanical/plumbing and electrical for additional observations.



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August 11, 2023

HIGHLAND HIGH SCHOOL MECHANICAL EVALUATION

As we walked the building, it was being restored from the fire in April. The original school was built in 1962 and was an all electric HVAC system. That system has been updated to gas/electric rooftop units. Each classroom has a 3-ton rooftop unit to heat, cool, and ventilate (fresh air) the classroom comfortably. The ductwork and fire sprinkling is exposed in the classrooms because the ceiling tile is glued to the bottom of the roof truss. The east B Wing classroom building with the box car air handler has gas duct furnaces that are failing because of low air across the burners. This box car unit needs to be replaced to correct the problem with the gas duct furnaces. The administration office, library, commons, and practice gym have air handlers with remote condenser on a mechanical mezzanine to heat, cool, and ventilate the spaces. The domestic piping to all the restrooms is under the floor to prevent freezing pipes. This is because the attic is classified as a cold attic. The building HVAC systems are controlled with Automated Logic Controls. The rooftop units and air handlers are able to provide and maintain a fresh comfortable learning environment in the classroom and spaces. The rooftop units and mechanical equipment need to be replaced as it nears the 20-to-25-year mark.

Note of Warning: Because of COVID, fresh air and filtration is coming to the forefront. Using CO² sensors and air flow monitors the rooftop unit fresh air damper can be controlled to meet any new code requirements. The filter efficiency is also being encouraged to move from MERV 8 to MERV 13 to capture particles and viruses.

Aug 8, 2023

Pocatello-Chubbuck School District 25
3115 Pole Line Rd
Pocatello, ID 83201

Re: Highland Highschool Structural Evaluation
1800 Bench Rd, Pocatello, ID
#23913.a

ARW Engineers has completed a limited on-site visual structural review and an as-built drawing review of the existing Highland Highschool building located at 1800 Bench Rd, Pocatello, ID. The visit was completed on Wednesday, August 2nd, 2023, with school district representatives and other members of the architectural and engineering design team present. The purpose of the review was to provide feedback to the school district regarding the current condition of the facility. The on-site review was limited to elements visible without any destructive removal of finish materials that may obscure structural elements. Exterior building elements were visually observed. Where possible framing was reviewed by removing ceiling tiles, but most of the facility had hard ceilings/finishes limiting what could be seen. An analysis to determine the gravity or lateral load carrying capacities of the structural elements was not within the scope of this review and not performed. All observations and items noted in this report are strictly based on limited visual observation and engineering judgement.

Building Description and Structural System

The original Highland Highschool consisted of multiple 1-story structures built in 1962. The roof is primarily wood framing of various construction consisting of Glulam beams, TJI open web wood joists, traditional 2x framing and steel beams at the gymnasium. The roof decking varies between plywood sheathing and tongue and groove (T&G) decking.

The roof structure is supported on both wood and masonry bearing walls with concrete foundation and footings below. Included in the original building footprint was the portion of the school that was recently destroyed by a fire.

In 1966 a classroom wing addition was added onto “B building” that is constructed similar to the original building.

At some point “E Building”, a multi-story addition was constructed as a free-standing building to the south of “C Building” but no information was provided regarding when this was added. It was indicated that about 5 years ago the space between these two buildings was infilled with a steel framed roof with metal deck.

In 1998 an addition and remodel took place that added a new gymnasium and tied all the various school wings together. This addition was primarily constructed of steel framing and decking supported on masonry walls. A combination of deep foundations and traditional foundation systems were used.

Observations and Evaluation of Building

Limited visual observations indicated that the structural gravity systems appear to be performing adequately with no issues noted. During the walk through most of the interior of the existing school was in various stages of being cleaned or repaired along with various fire sprinklers and other systems being installed. The existing finishes also limited what could be seen so most of the structural members were not accessible for observation so there may be unseen issues that could not be observed.

In addition to the visual observations, ARW Engineers did a limited review of the as-built drawings provided by the owner. Drawings for all the additions of the school were not provided and the information that was available was limited. The information in the 1962 drawings indicate that the building was constructed according to typical design and detailing practices of that time period which does a fairly adequate job of addressing typical gravity loads on the structure with the exception of snow and snow drift loads that have been updated periodically. Older building codes also didn't adequately address wind and seismic detailing requirements found in current codes. These items were noted in our review of the 1962 as-built drawings and are outlined below:

- Information is not provided on the drawings indicating what use used for the roof design snow load. Currently the roof design snow load in Pocatello is 35 psf and there is the possibility that older buildings codes could have allowed for a lower design value. This could potentially be an issue in a significant snow event.
- Snow drift loading could potentially occur around the higher roof structures. It is not clear if the existing lower roofs were checked for these additional loads, which was not a common requirement in older building codes.
- The original building roof diaphragm has various locations of tongue and groove decking which may not be adequate to resist lateral forces during a seismic event.
- Roof diaphragm to wall connections may not be adequate to resist lateral forces during a seismic event.
- Non-bearing masonry interior partition walls may need bracing and could be a life safety hazard during a seismic event.
- At locations where wood walls would likely be utilized as shear walls it appears that fiberboard sheathing was used which would not be adequate to resist seismic forces.

The 1998 addition and remodel was designed using more current code and construction practices that are typically acceptable for both gravity and lateral requirements. The drawings did indicate that a design snow load of 30 psf was used which is below the current snow load requirements for Pocatello. This could create potential issues for roof members during a significant snow event. The only other primary concern that was noted during the limited review of these drawings is the fact that this addition is not seismically independent of the original school. Tying all these different structures together does create lateral complexities that may cause unexpected consequences during a seismic event.

Due to the size, shape and complexity of this building a more detailed analysis would be required to document and note all building deficiencies and potential fixes which is beyond the scope of this report. These building deficiencies could be identified in a more detailed analysis and review of the building. If the school district wants a more in-depth understanding of the building deficiencies, an ASCE 41 Tier 1 evaluation would be recommended. Additionally, a deficiency-based Tier 2 analysis could be conducted to determine potential upgrades.

Conclusion and Recommendations

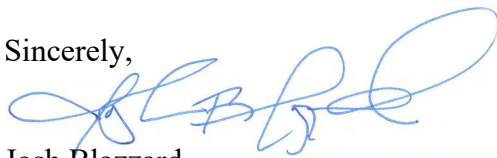
Based on the limited information provided the existing school is performing adequately under gravity loads, but there is the possibility of issues during a significant snow event if the loads exceed the original design snow loads. An analysis and more in-depth review of the roof framing would be recommended to determine the actual roof capacity to resist current snow loading requirements.

During a seismic event it is anticipated the building may experience moderate damage, particularly at locations where the various buildings are connected. Upgrades to the roof diaphragm, wall anchorage and shear wall upgrades are likely upgrades that would be required to significantly improve the performance of the structure during a seismic event.

Disclaimer

The information provided in this report is for the intended use of the architect and school district and is not a comprehensive structural review, evaluation, or analysis of the structural systems and elements at the building location indicated above. It should be understood that this review was not exhaustive, and as additional information becomes available the conclusions and recommendations contained in this report may need to be re-evaluated and amended. Should additional assessment or information be desired, ARW Engineers would be pleased to provide that information. Please contact us if there are any questions.

Sincerely,



Josh Blazzard



Robert Moyle, SE

23913.A_Highland Highschool Report_20230807

Electrical study for Pocatello School District

Washington, Tendoy & Edenhov Elementary Schools

These existing schools have been well maintained by the school district. Washington Elementary has served the community well for over 100 years. There is electrical evidence of the aging of these buildings. Wiremold carries network cabling and some electrical wiring throughout the schools. Remodel work and network system expansion work has been done using surface mounted raceway to minimize costs associated with hard ceiling/wall replacement. At Washington Elementary, computer systems did not exist when this building was constructed.

While the electrical systems are dated, none of them are obsolete except for the intercom and clock system at Washington Elementary. Equipment and parts to make repairs for that intercom/clock system are not easily found. Right now, technicians in the school maintenance department manually attempt to make repairs using whatever methods possible when some component of the Washington school intercom system stops working. This system should be replaced with a current system in the future. Replacement would most likely require additional wiremold to be installed to carry new wiring to new components. All other systems could remain as installed and would work for several years to come. Intercom systems for the other two schools generally can still be serviced with replacement parts.

In recent years the lighting systems have been upgraded. Current luminaires utilize T8 lamps. For now, these lamps are readily available. We are seeing fluorescent lamps slowly becoming obsolete as more and more luminaires are being retrofitted with LED lamps. The district is migrating to LED lamps/luminaires as funds are available.

Current electrical panels are manufactured by Square D and GE in all elementary schools. Breakers for these panels are readily available.

The fire alarm systems are manufactured by Honeywell (Silent Knight). Parts for these systems are readily available and service is local.

Highland High School

Similar to the elementary schools, this school is in excellent condition electrically for its age despite the recent fire.

In recent years the lighting systems have been upgraded. Current luminaires utilize T5, T8 and LED lamps. T5 lamps are getting harder to obtain. For now, T8 lamps are readily available. As noted above, we are seeing fluorescent lamps slowly becoming obsolete as more and more luminaires are being retrofitted with LED lamps. The district is migrating to LED lamps/luminaires as funds are available.

Current electrical panels are manufactured by Square D. Breakers for these panels are readily available.

The fire alarm system is new and meets all current codes. It is serviced locally.

Summary for all schools:

As energy costs continue to rise, it is recommended that all the luminaires be replaced with more energy efficient LED lighting. Adding some lighting controls would also help reduce costs. Idaho Power has monetary incentives to assist in paying for this upgrade.

If these buildings were required to be brought up to current electrical code, the lighting systems would need to be reworked to reduce foot candles in all spaces and to reduce energy consumption. Lighting control would be required including control in daylight zones. Standard classroom receptacles would need to be replaced with tamper resistant receptacles. Some additional GFI receptacles/breakers would be required in the kitchen and other unfinished areas and within 6 feet of sinks.

The elementary fire alarm systems would need to be upgraded to voice annunciation systems.

These upgrades would be costly due to the nature of remodel work and retrofitting systems into old buildings. In the next energy code cycle, a new code would require half of the receptacles in classroom/office spaces be switched when the spaces are not occupied. This additional layer of control is a further attempt to reduce building energy.

We live in a world where schools have become targets of crime. While not required by code, all schools should be remodeled to have secure entrances. Each school should also be able to be locked down from the individual school administrative office. That would be very difficult with current building layouts.