

WASHINGTON SCHOOL OF EARLY LEARNING: BUILDING EVOLUTION

Washington School of Early Learning was originally constructed in 1967 and an addition was completed in 1976.

The following building evolution diagram outlines the additions made to the original building over time due primarily to student enrollment growth.



Washington School of Early Learning Main Entrance

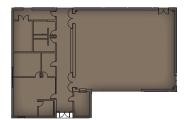




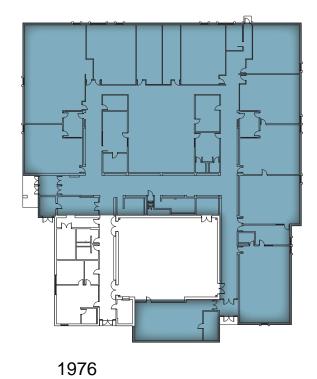


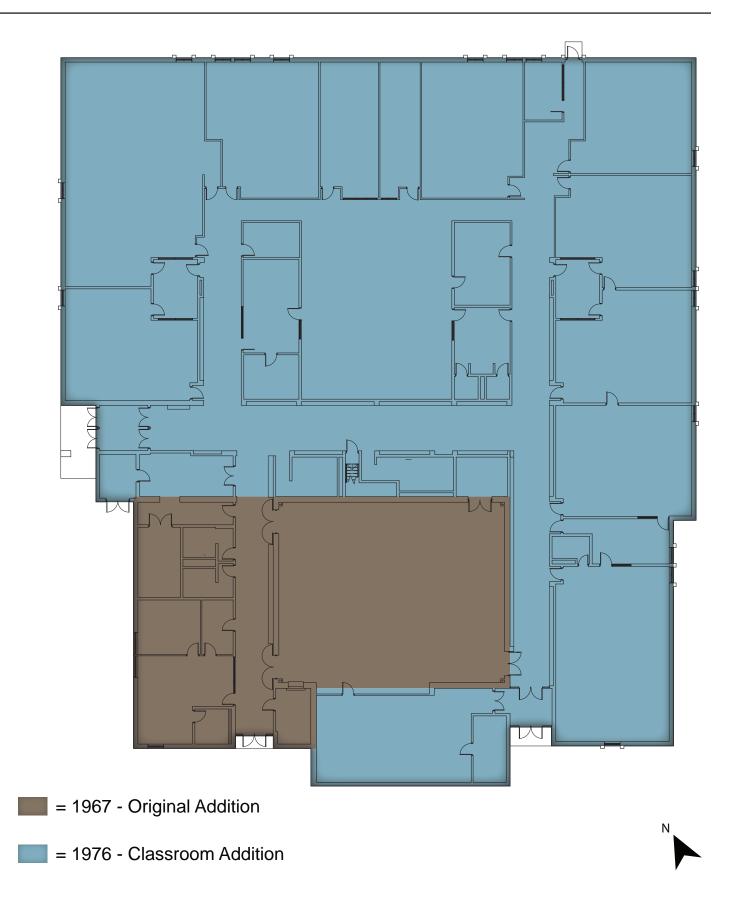
Washington School of Early Learning Corridor





1967

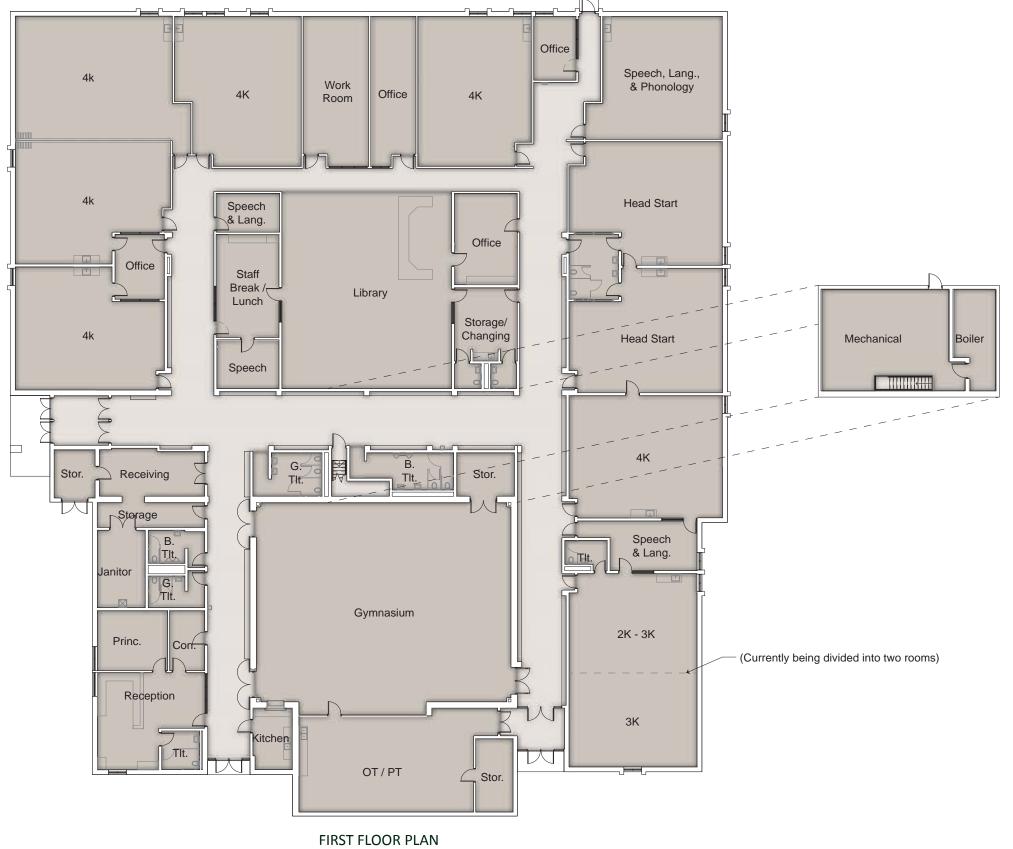






NEENAH Joint School District







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WASHINGTON SCHOOL OF EARLY LEARNING: PARENT SURVEY FEEDBACK

In February 2017, the District sent out a survey via email to all parents of students within the District with the focus on identifying and prioritizing needs at each school. Parents where asked to respond to a series of questions, as well as provide open-ended comments if desired.

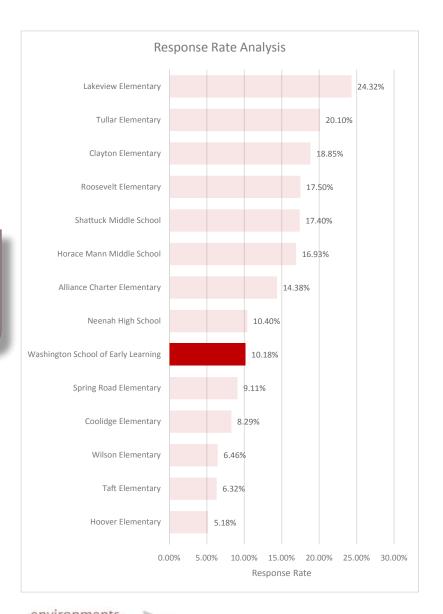
The following information reflects feedback and response rate for Washington School of Early Learning.

TOTAL PARENTS TO RECEIVE SURVEY: 226
TOTAL NUMBER OF RESPONSES: 23

RESPONSE RATE: 10.18%

ADDITIONAL NOTES

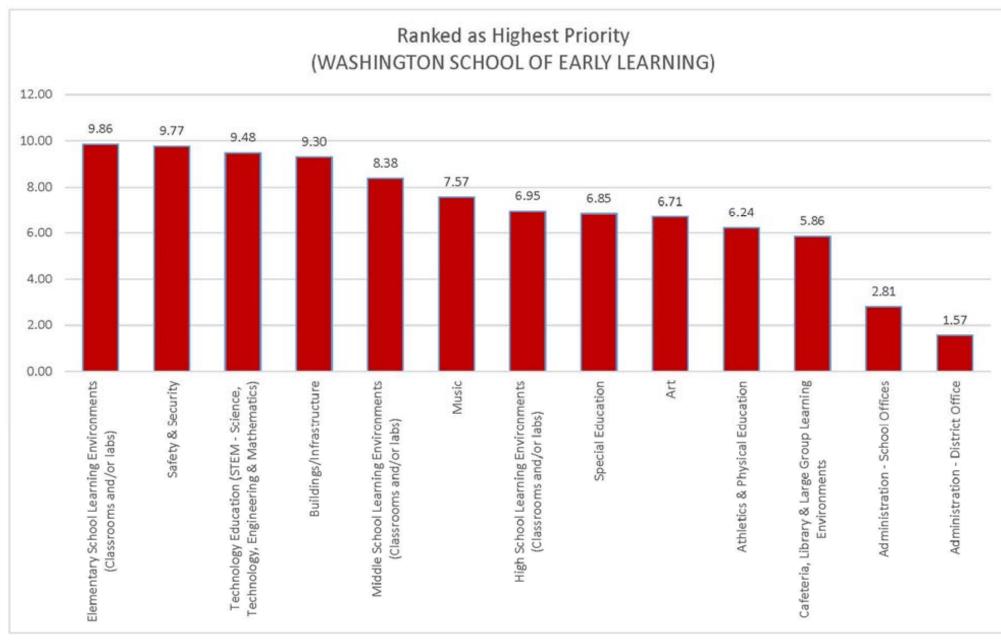
 Washington School of Early Learning accounts for 4.01% of all parent survey feedback

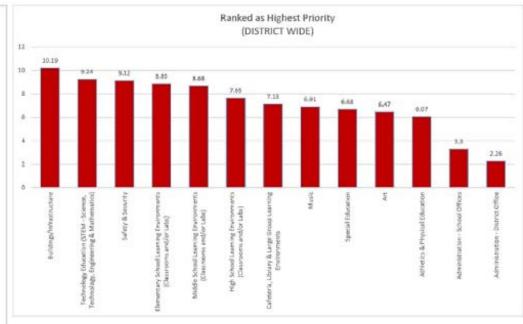




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WASHINGTON SCHOOL OF EARLY LEARNING: SUMMARY OF STAFF SURVEY FEEDBACK

The following is a summary of potential improvements at Washington School of Early Learning. This is not intended to be a comprehensive list, but a summary of possible upgrades as identified by staff. The following information was obtained from staff survey responses and numerous meetings and listening sessions held by district leadership and Bray Architects with the objective of casting a broad net to try and gather as much feedback regarding needs as possible.

1. Academic & Educational Improvements: CLASSROOMS

- Undersized
 - Unable to accommodate peer models in Early Childhood classrooms due to class size restrictions; certain classes (Speech/Language) are only available to students with special needs
 - (4) Early Childhood classrooms desired instead of current (2)
- · Existing sinks are too tall for student use
- Additional storage/updated cabinets and shelving desired within the classroom for supplies, book storage, etc.
 - Existing shelving is undersized/too narrow
- Additional outlets and charging stations desired
- · Sound-proof walls between classrooms desired
- Additional tackable cork boards/strips/surfaces desired to allow for additional display of student work
- · Variety of flexible/movable/modular furniture desired

CONFERENCE ROOMS & LARGE/SMALL GROUP INSTRUCTION

- Dedicated conference/meeting rooms desired
- Small group instruction spaces desired for one-on-one learning, test taking, tutoring, etc.

LIBRARY

- · Better access to natural light desired
- Variety of flexible/movable furniture desired
- Additional storage space and shelving for books and supplies desired
- · Additional display casework desired

SPECIAL ED.

· Dedicated sensory and cool-down rooms/space desired

SUPPORT/ STAFF

- Dedicated support space for teachers to store supplies outside of the classroom desired
- Dedicated staff lounge/break room desired

GYMNASIUM

· Additional storage/shelves for gym equipment desired

HEALTH ROOM/ NURSE

Dedicated room with ample space to accommodate the health aide desired

2. Facility & Site Improvements:

TECHNOLOGY

- Better access to technology/additional options desired
- Document camera(s)
- Tablet/lap-top technology for all students desired ("one to one")

INFRASTRUCTURE

- Windows
 - New/updated and energy efficient windows desired
 - Operable windows desired; current window hardware is worn
 - New blinds desired: current blinds are broken
- Doors
 - Wider, possibly automated doorways desired that can accommodate students with learning disabilities and mobility needs
- · Finishes Flooring, walls, etc.
 - Various floor finishes desired within the classroom to support activities (tile and carpet)
 - Replacement of old/dated carpet desired
 - Some classroom floors are uneven
 - Existing wall dividers are old/worn; sound/light coming through can be distracting
 - Newly/painted walls desired, especially in the classrooms and corridors

BUILDING SYSTEMS

- HVAC
 - Consistent temperatures/heating/cooling throughout the building desired

SITE

- · Larger, improved playground areas desired
- · Improved paving/resurfacing of parking lot desired
- · Additional parking stalls desired
- Improved bus pick-up/drop-off sequence desired
- Outdoor workspaces/classrooms desired

MISCELLANEOUS

- Bathrooms
 - Bathrooms desired that are located within the classroom
 - Additional student and staff bathrooms desired
- Additional storage space for student belongings desired (lockers, hooks, etc.); existing corridor coat hooks protrude into the corridor and often injure students
- Age-appropriate heights desired for toilets, drinking fountains, sinks, coat hooks, etc.
- Safe/secure entry desired, where visitors must enter the office prior to being released into the rest of the building



WASHINGTON SCHOOL OF EARLY LEARNING: SUMMARY OF STAFF INTERVIEW FEEDBACK

The following is a summary of potential improvements at Washington School of Early Learning. This is not intended to be a comprehensive list, but a summary of possible upgrades as identified by staff. The following information was obtained from staff interviews and numerous meetings and listening sessions held by district leadership and Bray Architects with the objective of casting a broad net to try and gather as much feedback regarding needs as possible.

1. Academic & Educational Improvements:

CLASSROOMS

- · Undersized; larger classrooms desired
- Additional storage/updated cabinets and shelving desired within the classroom for supplies, book storage, etc.
 - Existing shelving is undersized/too narrow
- · Existing sinks and drinking fountains are too tall for student use

CONFERENCE ROOMS & LARGE/SMALL GROUP INSTRUCTION

- Dedicated conference/meeting rooms desired
- Small group instruction spaces desired for one-on-one learning, test taking, tutoring, etc.

LIBRARY

 Enclosed flexible space for play/waiting for parents with kids; would like to be near the main office for visibility

SPECIAL ED.

- · Dedicated sensory and cool-down rooms/space desired
- · Special Ed students are within classrooms currently
- · Dimmable lights desired
- OT/PT space desired

SUPPORT/ STAFF

- · Laundry facility desired washer/dryer
- · Dedicated teacher lounge and work room

GYMNASIUM

· Cafeteria/kitchen desired if students have full-day classes

HEALTH ROOM/ NURSE

- Dedicated room with ample space to accommodate the health aide desired
- Dedicated hearing/vision screening space desired

2. Facility & Site Improvements:

TECHNOLOGY

- Better access to technology/additional options desired
- · Better wifi access desired
- Tablet/lap-top technology for all students desired ("one to one")

INFRASTRUCTURE

- Windows
 - New/updated and energy efficient windows desired
 - Operable windows desired; current window hardware is worn
- · Finishes Flooring, walls, etc.
 - Various floor finishes desired within the classroom to support activities (tile and carpet)
 - Replacement of old/dated carpet desired

SITE

- · Larger, improved playground areas desired
- · Improved paving/resurfacing of parking lot desired
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- Bathrooms
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- Age-appropriate heights desired for toilets, drinking fountains, sinks, coat hooks, etc.
- Safe/secure entry desired, where visitors must enter the office prior to being released into the rest of the building



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WASHINGTON SCHOOL OF EARLY LEARNING: NEEDS ASSESSMENT

The following is a summary of potential improvements at Washington School of Early Learning. This is not intended to be a comprehensive list. The following information was obtained through notations made by Bray Architects at extensive tours of the building and grounds, as well as needs identified by school maintenance personnel.

1. Interior Infrastructure/Maintenance:

WALLS

a. Cracking present in walls at the base of floor tiles in the bathrooms

CEILING

- b. Gymnasium contains tectum panels at the ceiling and upper half of the walls; this material is dated and worn, and the ceiling contains stained areas at the edge conditions, possibly due to water damage
- c. Many of the ceiling tiles are dated, with some tiles chipped/missing pieces and many bowing, bending and separating from the ceiling grid; older, small ceiling panels appear mismatched due to replacement of single panels over time

FLOORING

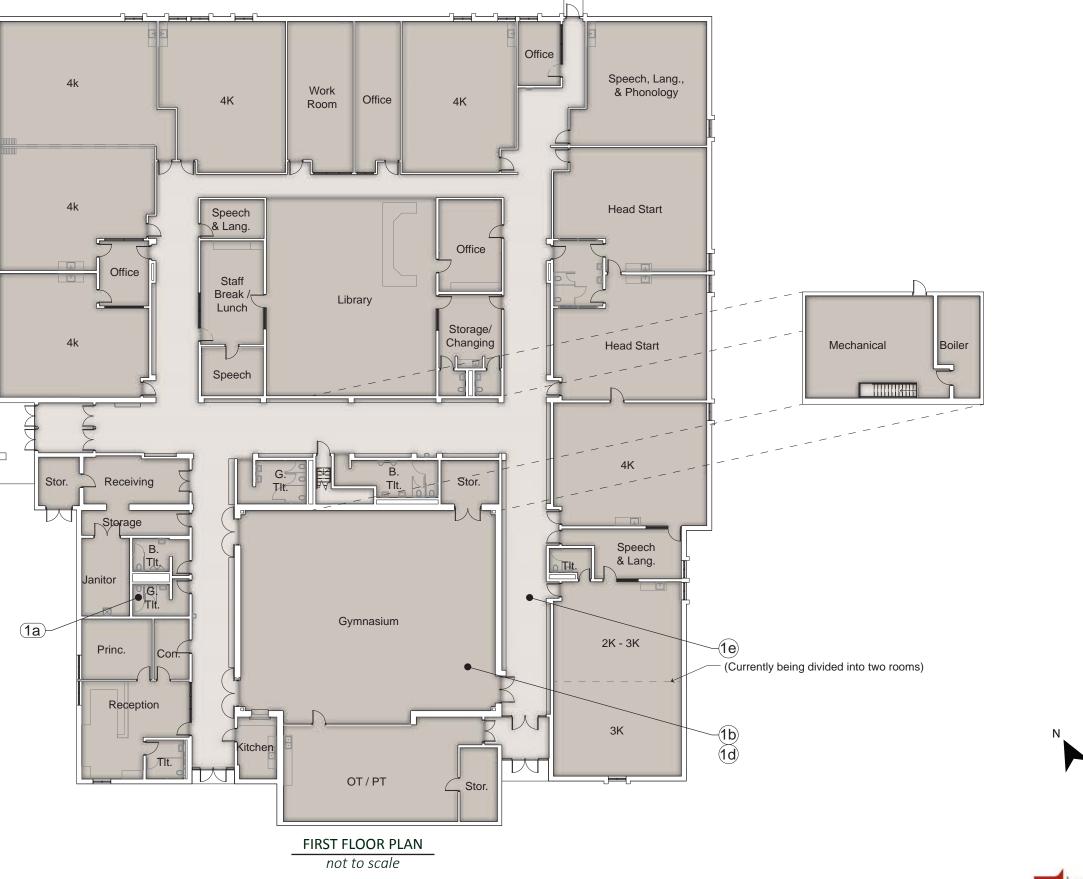
- d. Gymnasium wood flooring is dated and worn, with areas throughout that appear stripped/peeling
- e. Terrazzo flooring contains large cracks, especially near the vestibules and where the floor transitions into the wall base at brick walls

2. Building Envelope:

WINDOWS

- a. Some windows have cracks in the glass panes **DOORS**
- b. Door #1 at the main entrance is dated and worn $\ensuremath{\mathbf{ROOFS}}$
 - c. Staining is present on the underside of the roof canopy







WASHINGTON SCHOOL OF EARLY LEARNING: BUILDING SYSTEMS SUMMARY

The following is summary of Plumbing, HVAC and Electrical needs. This is not intended to be a comprehensive list, but a summary of existing building system needs and possible recommendations as identified by the engineering team. Full engineers' reports are located later in this document.

Plumbing:

- Water is supplied by a 2" water service which connects to the Municipal water system; new additions or major renovation would require a new larger water service.
- Water distribution piping is mostly copper tube and fittings with some galvanized pipe and fittings in the original building, appears to be in fair condition, and is at the end of is life expectancy; replacement of existing pipe and fittings with new type "L" copper tube and fittings is recommended.
- There is no sprinkler system; if a complete fire sprinkler system is desired, a new 6" water service is required.
- Sanitary waste flows by gravity out of the building and connects to the Municipal sanitary sewer system; there are no reported challenges with the system, and sanitary waste and vent piping is reported to be in good condition.
- Prep kitchen has a 2-compartment sink with no disposal nor interior grease interceptor.
- Classroom sinks do not have solids traps installed on the waste piping.
- Roof water is collected by internal roof drains and conductors which connect to the Municipal storm sewer system; there are no reported challenges with the system.
- · No sump pumps were located.
- The electric water heater is at the end of its useful life, is in fair condition, is not energy efficient, and should be replaced with a gas fired high efficiency water heater.
- The Morton water softening system appears to be in good condition and serves the HVAC system only.
- Plumbing fixtures are a combination of various styles and ages, with most of the fixtures original to the building age they were installed and some of the fixtures having been replaced with newer water efficient and ADA compliant fixtures. Water closets, urinals, and lavatories should be replaced with new water conserving and ADA compliant fixtures, and drinking fountains should be replaced with new ADA compliant fixtures with a bottle filler. Faucets on classroom sinks should be replaced with new ADA compliant faucets.

HVAC:

- Hot water boiler plant is in good condition, has no reserve capacity
 as indicated by owner, and has two Thermal Solutions hot water boilers
 that are fired with natural gas. Continue preventative maintenance, and
 the boiler plant should continue to serve the facility for several more
 years; any future additions or construction will most likely require the
 addition of boiler capacity to serve the additional spaces.
- Piping and pumping system consists of a single-circuit system with a stand-by pump, and the owner indicated that there are no current concerns with the heating supply system.
- Unit ventilators serving the gymnasium were installed in 1976, are in poor condition, and have exceeded their estimated life expectancy of 25 years; plan for its eventual replacement.
- Indoor variable air volume unit serving the remainder of the school was installed in 1976, is in poor condition, and has exceeded its estimated life expectancy of 30 years; plan for its eventual replacement.
- Continue to maintain and operate the digital temperature control system, as is it is in good condition.



Electrical:

- The main electric service has been recently replaced, is in good working condition, and has no capacity for any future loads; exercising of circuit breakers and performing thermal imaging analysis for predictive maintenance purposes is recommended. Provide surge suppression, as none exists.
- Panelboards vary in age, with some nearing the end of their useful lifespan, and some having been replaced or added during the most recent service upgrade and are in good condition; vintage circuit breaker panelboards should be scheduled for replacement within the next 10 years.
- Utility service consists of pole mounted transformers with an overhead electrical service.
- Provide a new emergency generator system if desired, as there is no emergency backup power available in the building
- Ensure proper working clearances are maintained in front of all panelboards at all times by using safety tape to physically indicate clearances on floor/wall around panelboards. Working clearance area may not be used for storage.
- Much of interior lighting throughout the building consists of a variety
 of T8 fluorescent or incandescent light fixtures that range in age and
 are in good condition, while the gymnasium has high bay metal halide
 fixtures; replace fixtures with LED equivalents and provide dimming
 controls and occupancy sensors to maximize on energy savings.
- General lighting controls in rooms consist of toggle switches with no occupancy sensors or dual level lighting, most classrooms utilize split area zones, and corridors have toggle switches with no occupancy sensors. Provide corridors with occupancy sensors and remove light switches.
- Schedule exterior light fixtures with LED equivalents and control via existing timeclock/photocell controls.
- If new LED lighting is provided, emergency lighting should be provisioned through back up batteries to normal light fixtures through egress paths and rooms with an occupant load greater than 50 people. An alternative option would be to provide a new emergency generator system. Currently there are no provisions for emergency lighting, except for a handful of wall mounted battery packs throughout the facility that provide minimal, non-code compliant light levels.

- Replace existing 15A rated receptacles with 20A rated type and provide additional receptacles throughout working spaces as necessary, as there is currently a general lack of receptacles throughout the building.
- Shoretel IP based phone system is in good working condition; no recommendations.
- Data service is provided via fiber optic utility service, is in good working condition, and fiber optic wiring interconnects all schools to the main district network. While it is unknown if the facility has ceiling plenums, riser rated data cabling should be replaced with plenum rated cabling if there are plenums in the ceiling.
- Data cabling consists of a variety of Cat5e and Cat6 cabling, in plenum and riser rated varieties, and the data rack has spare rack capacity for future needs. Data cabling at the data rack should be reinstalled in a clean workmanlike manner with proper labeling.
- Provide a UPS battery backup system to provide battery backup power to the data rack, as there are no provisions for backup power.
- Keyless entry system is in good working condition; access controlled doors are controlled via electric strikes and card readers, and none of the exterior doors have door position contacts. Provide door monitor contacts on all exterior doors to help monitor and control access to the facility.
- Vintage Rauland intercom system is past the end of its useful lifespan, staff indicated that Rauland doesn't make parts for the unit anymore, and intercom speakers are nearing the end of their useful lifespan. Bell schedule system is controlled via timeclock and has no reported issues. Schedule the existing intercom system for full replacement with a new IP-based intercom system, schedule speakers for replacement, and provide additional speakers in areas lacking coverage.
- CCTV system has 6 cameras, seems to be in good working condition, and the District plans to add about 5 more cameras to the system in the future; provide new cameras where additional coverage is necessary.
- Vintage alarm system is about 15 years old and in good working condition, but lacking in notification coverage by today's standards; provide additional fire alarm notification devices in areas where coverage is lacking.
- Add a security system to control and monitor access to the facility, as none exists.



WASHINGTON SCHOOL OF EARLY LEARNING: BUILDING SYSTEMS SUMMARY

Electrical (cont.):

- Replace existing clocks with a synchronized clock system such as a GPS wireless clock system.
- Building has a monitoring system to ensure boilers in the facility are operational

WASHINGTON SCHOOL OF EARLY LEARNING: SITE SUMMARY

The following is a summary of potential improvements at Washington School of Early Learning. This is not intended to be a comprehensive list, but a summary of possible upgrades as identified by Bray Architects and the engineering team. The following information was obtained through notations made by architects and engineers at extensive tours of the building and grounds, as well as needs identified by maintenance personnel.

4. Site Improvements:

AREA 1 - STAFF/VISITOR PARKING

• Existing pavement is in great condition; re-evaluate in 2-5 years

AREA 2 - ASPHALT PLAY AREA

- · Distresses Present:
 - Patch Failure
 - Thermal cracking
 - Raveling
 - Surface weathering
- · Recommended Repair:
 - Remove existing pavement and 12 inches of base and/or subgrade
 - Place 12 inches of base aggregate dense
 - Pave 3 inches of asphaltic pavement
 - Paint all pavement markings for a playground

SITE CONCRETE

- · Distresses Present:
 - Spalling at edges of sidewalk in areas
 - Large cracks in sidewalk that poses a tripping hazard
- · Recommended Repair:
 - Remove and replace the areas of sidewalk that have spalling or cracked

ADDITIONAL NOTES

• There is no dumpster enclosure, nor is there enclosure around electrical units on site





SITE PLAN

not to scale

355



WASHINGTON SCHOOL OF EARLY LEARNING: ADA ACCESSIBILITY ASSESSMENT

The following is an analysis of Washington School of Early Learning in regards to meeting building code requirements under the Americans with Disability Act (ADA) and regulated by the American National Standard (ANSI) Accessible and Usable Buildings and Facilities. This is not intended to be a comprehensive list, but an analysis as identified by Bray Architects and engineers gathered through extensive tours and assessment of the existing building facility.

1. Building Entrance:

There is at least (1) accessible route of travel. Entry at grade level or ramps with slope no greater than 1:12, and has 5'-0" long landings every 30'-0".

1a. The building has multiple accessible entrances at this level that meet the above criteria.

2. ADA Parking:

Designated/marked ADA stalls are located near the entrance of the building and have 5'-0" access aisles between stalls (502.4.1; 502.4.2).

2a. The site contains marked ADA stalls located near the nearest accessible entrance.

3. Ramps & Lifts:

There is at least (1) accessible route to each floor level. Changes in level greater than 1/2" in height shall be ramped (303); ramps have a slope no greater than 1:12 and have 5'-0" long landings every 30'-0" (405.2).

3a. There are areas of limited accessibility where the building meets the criteria for accessibility standards.

4. Railings:

Handrails shall be provided on both sides of stairs and ramps, except for aisle stairs and ramps, which may be provided with a handrail either at the side or within the aisle width (505.2). Ramp runs with a rise greater than 6 inches shall have handrails (405.8).

Ramp handrails shall extend horizontally above the landing 12 inches minimum beyond the top and bottom of ramp runs. Extensions shall return to a wall, guard, or floor, or shall be continuous to the handrail of an adjacent ramp run.

Handrails shall be continuous within the full length of each stair flight or ramp run. Inside handrails on switchback or dogleg stairs or ramps shall be continuous between flights or runs, except for handrails in aisles serving seating (505.3).

At the top of a stair flight, handrails shall extend horizontally above the landing for 12 inches minimum beginning directly above the nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight (505.10.2).

At the bottom of a stair flight, handrails shall extend at the slope of the stair flight for a horizontal distance equal to one tread depth beyond the bottom tread nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight (505.10.3).

4a. There are handrails that do not meet the above criteria for accessibility standards.

5. Maneuvering, Thresholds, & Push/Pull:

On the pull side, a minimum clearance of 18" is required parallel to the doorway. On the push side, a minimum of 12" is required parallel to the doorway (404.2.3.1). Distance between two hinged or pivoted doors in series shall be 48" minimum plus the width of any door swinging into the space (404.2.5). Doors have a minimum 32" wide clearance. Maneuvering clearances on either side of the door are a minimum of 60" from the pull side and 48" from the push side.

Thresholds at doorways shall be maximum 1/2" high otherwise a ramp is required (303.2; 303.3).

- 5a. There are areas where the requirements for push/pull do not meet the above criteria for accessibility standards.
- 5b. There are areas where the requirements for maneuvering meets the above criteria for accessibility standards.
- 5c. There are areas where the requirements for thresholds meets the above criteria for accessibility standards.

6. Door Hardware & Panic Hardware:

Doors have open, lever-styled hardware (no round/knob hardware) (404.2.6). Egress doors have panic hardware.

6a. There are doors that do not meet the above criteria for accessibility standards



7. Restrooms:

Public restrooms have at least 5'-0" clearance space for a wheelchair to turn around, at least (1) ADA accessible stall (sized 60" min. depth x 56" min. width, for wall-mounted stalls, and 59" min. depth for floor-mounted stalls) with 5'-0" clearance (604.3.1), and at least (1) sink at a 34" maximum height (606.3). The compartment door clearance between the door side of the compartment and any obstruction shall be 42" minimum. Compartment doors shall not swing into the required minimum area of the compartment (604.9.3)

There is at least (1) unisex restroom per floor level, and unisex restrooms have at least 5'-0" clearance space for a wheelchair to turn around, as well as a sink/counter-top height at a maximum of 34".

Mirrors located above the sink or counter shall have the bottom edge at a maximum height of 40" above the floor. Mirrors not located above a sink or counter shall have a bottom edge at a maximum height of 35" above the floor (603.3).

Fixed stall grab bars shall be 42" minimum in length located 12" maximum from the rear wall. Vertical fixed grab bars shall be 18" minimum in length, the bottom edge of the bar shall be 39" to 41" above the floor, and 39" to 41" from the rear wall (604.5.1). Rear fixed grab bars shall be 36" minimum in length and extend 12" from the centerline of the toilet. Rear grab bars shall be 24" minimum in length centered from where wall space doesn't permit 36" grab bar (604.5.2).

Bottom edge of urinals shall be 17" maximum above the floor (604.10.4).

ADA showers shall be 36" by 36" minimum with an entry of 36" by 48" minimum. A 36" minimum depth shall be provided adjacent to the open face of the compartment (608.2.1). A roll in shower shall be 60" x 30" minimum with a 60" minimum opening adjacent to the stall (608.2.2). A seat shall be 24" minimum to 36" maximum in length shall be provided at the entry side of the compartment (608.2.3).

Horizontal shower grab bars shall be provided across the control wall and on the back wall to a point 18" from the control wall (608.3.1.1). Vertical shower grab bars shall be 18" minimum in length on the control wall and 3" minimum to 6" maximum above the horizontal grab bar and 4" maximum inward from the front edge of the shower (608.3.1.2).

7a. There are restrooms that do not meet the above criteria for accessibility standards.

8. Drinking Fountains & Protruding Objects:

At least (1) fountain has a clear foot space of at least 30" x 48" in front and has a spout height at a maximum of 36" off the ground. Children's fountain spout shall be 30" maximum above the floor. Wheelchair fountain spout shall be 36" maximum and standing 38" to 43" above the floor (602.4).

Objects more than 27" and not more than 80" above the floor shall protrude 4" maximum into the circulation path (307.2). Objects shall not reduce clear width required for accessible routes (307.5). Guardrails or other barriers shall be provided where object protrusion is beyond the limits allowed, and where the vertical clearance is less than 80 inches above the floor. The leading edge of such guardrail or barrier shall be 27 inches maximum above the floor (307.4).

8a. Drinking fountains do not meet the above criteria for meeting accessibility standards.

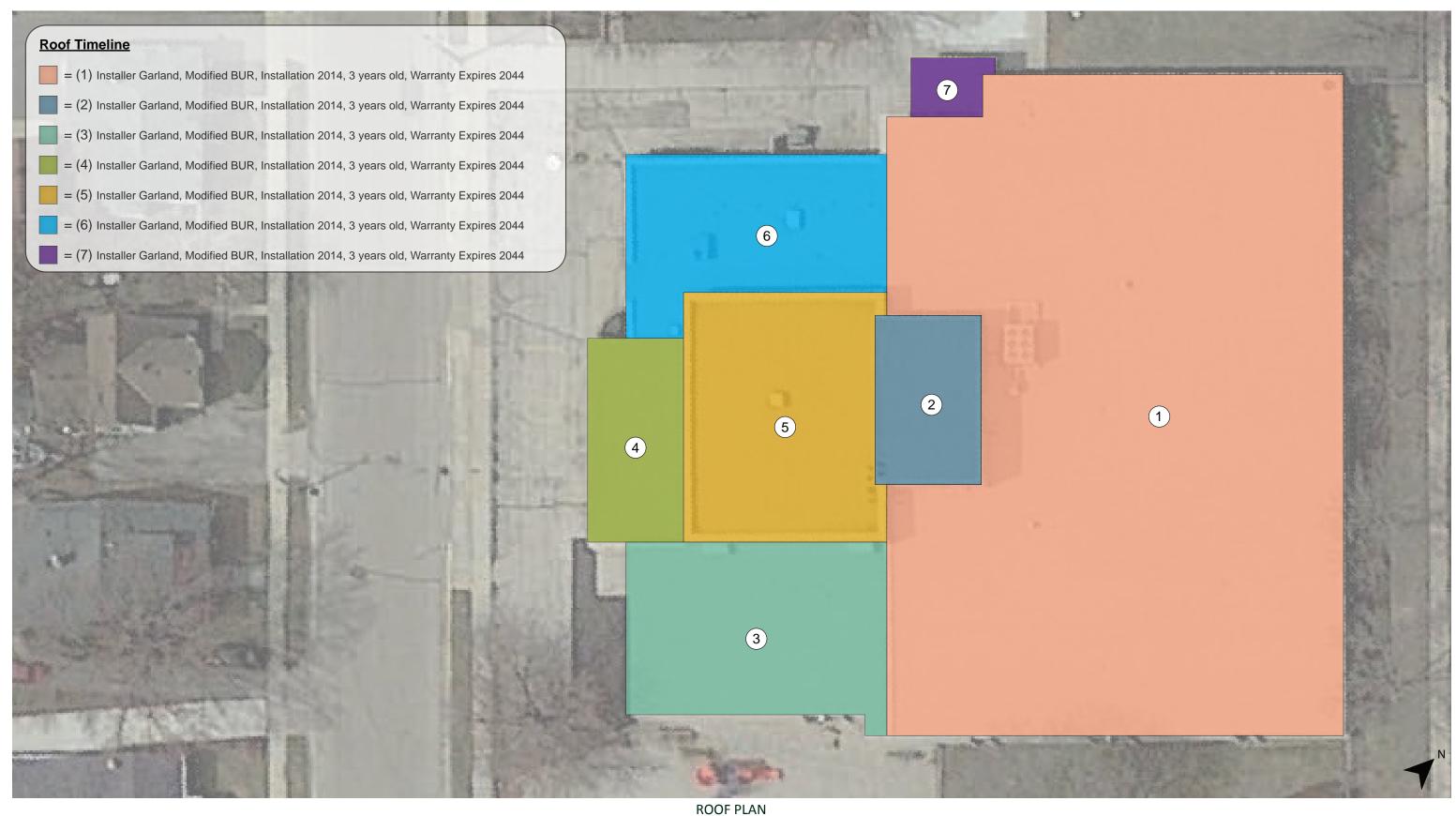
9. Casework, Transaction Counters, & Counters with Sinks:

Counter-tops have a maximum 34" height, and transaction counters have an accessible portion that is at a maximum 34" height for wheelchair accessibility (606.3). Counters and work surfaces for children's use shall be 26" minimum and 30" maximum above the floor (902.4.2).

9a. There are counter-tops that do not meet the above criteria for meeting accessibility standards.







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WASHINGTON SCHOOL OF EARLY LEARNING: EXTERIOR DOOR ANALYSIS

No.	Door Type	Frame Type
1	Hollow Metal	Hollow Metal
2	Hollow Metal	Hollow Metal
3	Aluminum	Aluminum Storefront
4	Hollow Metal	Hollow Metal
5	Hollow Metal	Hollow Metal



HOLLOW METAL DOORS & HOLLOW METAL FRAME



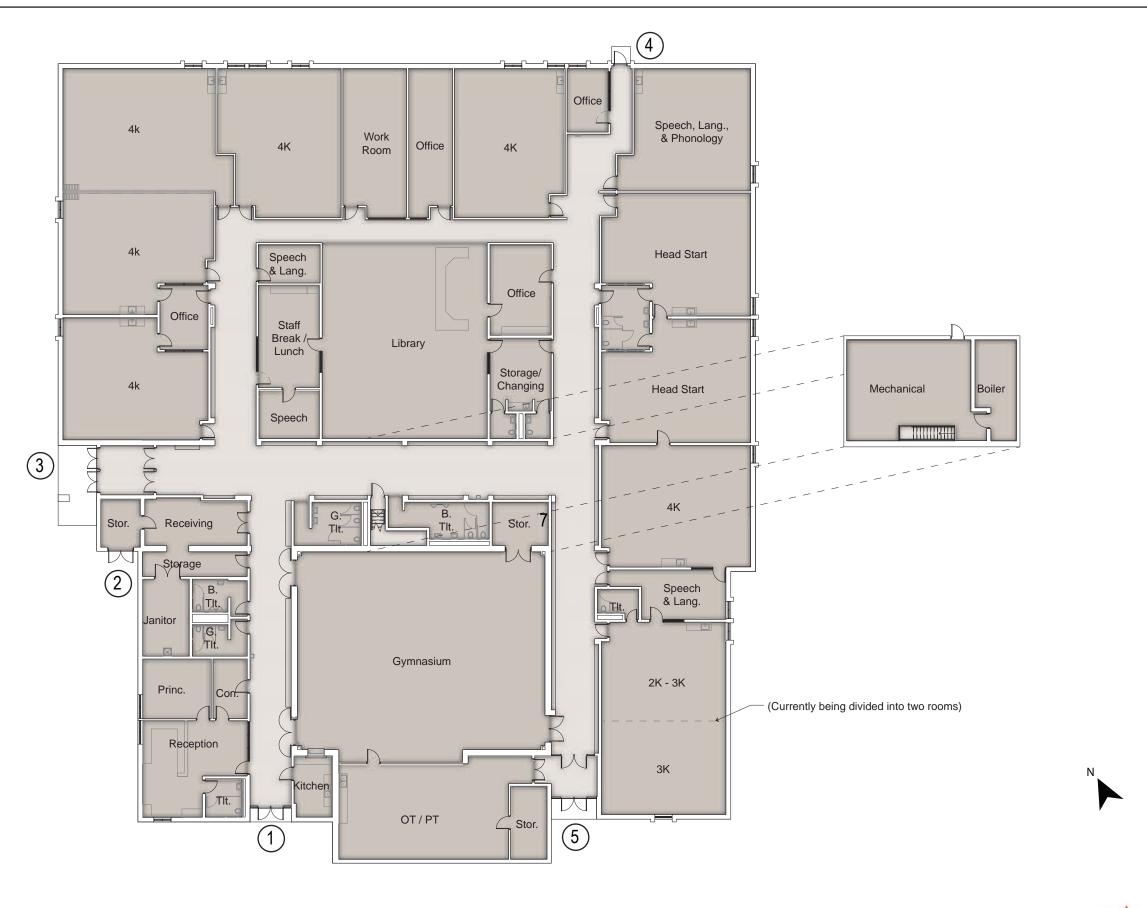
HOLLOW METAL DOORS & HOLLOW METAL FRAME











ACT - 9x9 (Asbestos)

ACT1 - 12x12 (Asbestos)

ACT2 - 6x6 (Asbestos)

CA - Carpet Broadloom

CAT - Carpet Tile

CT1 - 1x1 Ceramic Tile

CT2 - 2x2 Ceramic Tile

CT12 - 1x2 Ceramic Tile

CTH - Hex Ceramic Tile CONC. - Concrete

PT - 8x8 Paver Tile

PT1 - 6x6 Paver Tile

PT2 - 3x3 Paver Tile

PT3 - 3x6 Paver Tile

RT - Rubber Tile

RTT - Rubber Tile Tread

SS - Seamless Synthetic

SV - Sheet Vinyl

TER - Terrazzo Tile

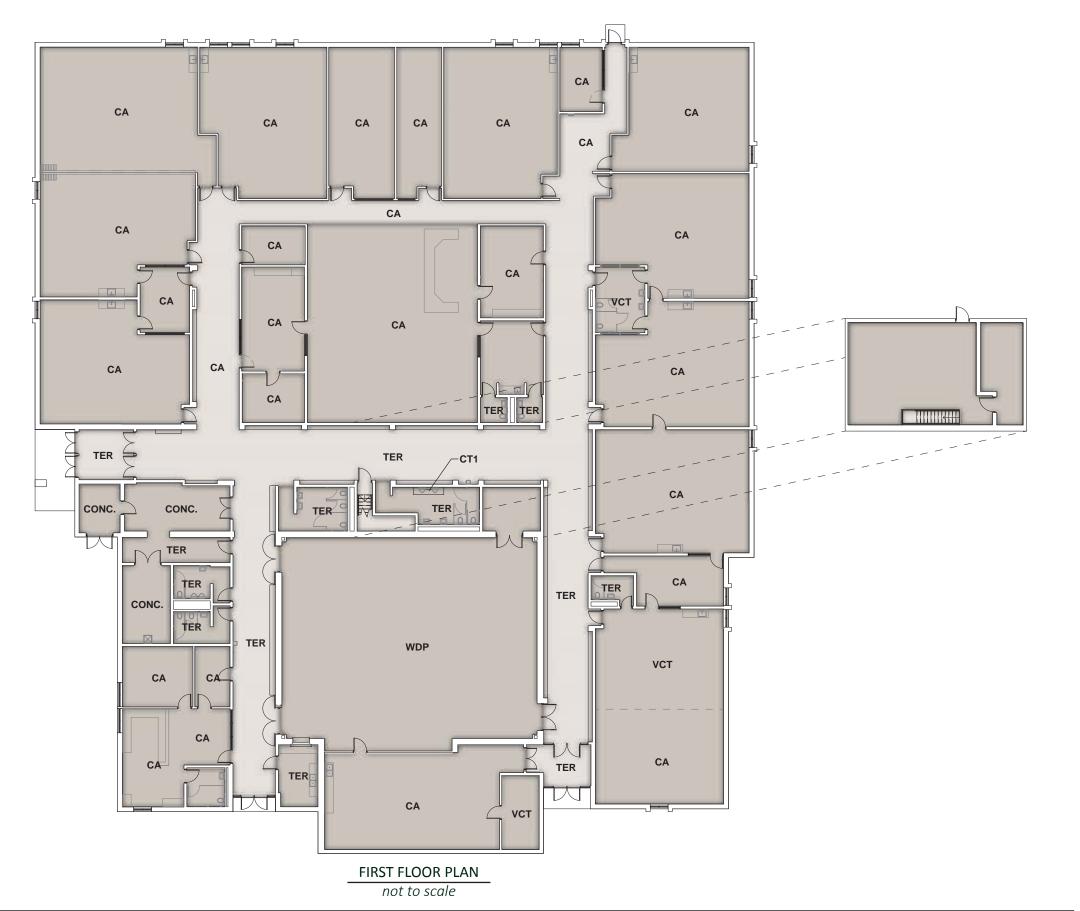
TER1 - 12x12 Terrazzo Tile

VCT - 12x12

WD - Wood

WDP - 4x4 Wood Parquet

WM - Walk-off Mat







^{*} Flooring Types Identified by Gries Architectural Group

Plumbing System Review:

The following report is the result of a site visit by Leslie Fry of Muermann Engineering, LLC that occurred in January 2017. Site observations and interviews with staff were used in the preparation of this report.

The original building was built in 1967 with one addition completed in 1976.

Domestic Water

Observations

- A. Water is supplied to the building by what appears to be 2" water service which connects to the Municipal water system. There is a water meter located in the building. The water service is at its limit and could not support any future additions.
- B. The majority of the water distribution piping in the building appears to be copper tube and fittings with some galvanized pipe and fittings in the original building. The water distribution piping appears to be in fair condition.
- C. The building has no fire sprinkler system.

Recommendations

- A. The water distribution piping in the building are at the end of their life expectancy. We would recommend replacing the existing pipe and fittings with new type "L" copper tube and fittings.
- B. If there are any new additions or major remodeling planned, a new larger water service will need to be provided.
- C. If a complete fire sprinkler system is preferred for the building, a new 6" water service will need to be provided.

Sanitary and Storm Piping

Observations

- A. The sanitary waste from the building flows by gravity out the building and connects to the Municipal sanitary sewer system. There are no reported challenges with the system.
- B. The sanitary waste and vent piping in the building is reported to be in good condition.
- C. The building has a prep kitchen with a 2-compartment vitreous china sink with no disposal. There is no interior grease interceptor.
- D. The classroom sinks do not have solids traps installed on the waste piping.
- E. The existing roof water is collected by internal roof drains and conductors which flow by gravity out the building and connect to the Municipal storm sewer system. There are no reported challenges with the system.
- F. No sump pumps were located.





Plumbing Equipment

Observations

- A. The building has one electric water heater that is at the end of its useful life and appears to be in fair condition.
- B. A Morton water softening system was observed and appears to be in good condition and serves the HVAC system only.

Recommendations

A. The existing water heater is not energy efficient. The unit should be replaced with a gas fired high efficiency water heater.

Plumbing Fixtures

Observations

- A. The existing plumbing fixtures in the building are a combination of various styles and ages. Most of the fixtures are original to the building age they were installed. Some of the fixtures have been replaced with newer water efficient and ADA compliant fixtures.
- B. The water closets are floor and wall set, flush valve type fixtures. They do not appear to be water conserving or ADA compliant. The fixtures are old and in fair condition.
- C. The urinals in the building are floor set with flush valves. The fixtures are not water conserving. The fixtures are old and are in fair condition.
- D. The lavatories in the building are wall hung with multiple styles of faucets. They do not appear to be water conserving or ADA compliant and are in fair condition.
- E. The drinking fountains in the building are vitreous china drinking fountains and wall hung electric water coolers. They are not ADA compliant and are in fair condition. The fixtures are in good condition.
- F. The classroom sinks are single bowl, stainless steel drop-in sinks with varying types of faucets and separate drinking fountain. The fixtures are not ADA compliant and are in fair condition.

Recommendations

- A. The water closets should be replaced with new water conserving and ADA compliant fixtures.
- B. The urinals should be replaced with new water conserving and ADA compliant fixtures.
- C. The lavatories should be replaced with new water conserving and ADA compliant fixtures.
- D. The drinking fountains should be replaced with new ADA compliant fixtures with a bottle filler.
- E. The faucets on the classroom sinks should be replaced with new ADA compliant faucets.







HVAC SYSTEM

The following report is the result of a site visit by Jason Testin of Fredericksen Engineering that occurred on January 19, 2017. Site observations, construction plan review, and interviews with staff were all used in the preparation of this report.

The original building was constructed in 1967, with an addition being constructed in 1976.

1.1 Heating System

A. Existing Data

- 1. A hot water boiler plant serves the building and consists of two Thermal Solutions hot water boilers each fired with natural gas. Each boiler has a capacity of 750,000 btu.
- 2. The piping and pumping system for the boiler plant consists of a single circuit system with a stand-by pump. If the primary pump fails, the secondary (stand-by) pump will provide hot water circulation to the system.

B. Observations

- According to information obtained by the Owner, the boiler plants have no reserve capacity at this point, as all boilers are brought online during periods of colder weather.
- 2. The boiler plant is in good condition. With recommended maintenance, the boiler should continue to serve the facility for several more years.
- 3. The Owner has indicated that there are no current concerns or issues with the heating supply system.

C. Recommendations

- 1. Continue preventative maintenance on the system.
- 2. Any future additions or construction will most likely require the addition of boiler capacity to serve the additional spaces.

1.2 Ventilation and Air Conditioning Systems

A. Existing Data

- 1. There are two systems that provide ventilation for the facility. The two systems are unit ventilators and variable air volume systems.
- 2. The gymnasium is ventilated using suspended, wall mounted unit ventilators. Unit ventilators house a fan, hot water heating coil, fresh air damper, and return air damper and controls in a single cabinet. Hot water piping is run to each unit ventilator.
- 3. The remainder of the school is ventilated by an indoor variable air volume air handling system. A variable air volume air handling unit consists of a central supply fan, hot water heating coil, DX cooling coil, roof mounted condensing unit, outside air damper, return air damper and relief fan. Hot water variable air volume boxes are added to the ductwork to provide individual room temperature control.

B. Observations

1. The unit ventilators were installed in 1976 and are in poor condition. The units have exceeded the estimated life expectancy of 25 years.





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2. The indoor variable air volume unit was installed in 1976 and is in poor condition. The unit has exceeded the estimated life expectancy of 30 years.

C. Recommendations

- 1. Plans should be made for the eventual replacement of the aging unit ventilators serving the gymnasium.
- 2. Plans should be made for the eventual replacement of the variable air volume unit serving the school.

1.3 Control Systems

A. Existing Data

1. The control system is a digital temperature control system.

B. Observations

1. The control system is in good condition.

C. Recommendations

1. Continue to maintain and operate the control system.



Electrical System Review:

The following report is the result of a site visit by Daniel Cedeno of Muermann Engineering, LLC that occurred on January 19, 2017. Site observations, existing plan review and interviews with staff were all used in the preparation of this report. The facility was built in 1967, with an addition occurring in 1976.

Electric Service

Observations

- A. The facility has an 800-amp, 120/208V 3-phase 4 wire main electric service that has been recently replaced and is in good working condition. The main switchboard has no capacity for any future loads. There is no surge suppression provision on the main electric service.
- B. The electric panelboards throughout the facility vary in age between old circuit breaker panelboards that are nearing the end of their useful lifespan, and some panelboards that were replaced or added during the most recent service upgrade that are in good working condition.
- C. Utility service to the building consists of pole mounted transformers across the street with an overhead electric service terminating at an exterior wall mounted CT cabinet and electric meter.
- D. There is no emergency backup power available in the building.

Recommendations

- A. The main electric service is in good working condition, recommendations include excercising of circuit breakers and possibly performing thermal imaging analysis for predictive maintenance purposes.
- B. Provide surge suppression to prevent equipment damage in the building during power surges.
- C. Vintage circuit breaker panelboards should be scheduled for replacement within the next 10 years.
- D. A possible recommendation is to provide a new emergency generator system to provide backup power and emergency lighting to the building during electric outages.
- E. Ensure proper working clearances are maintained in front of all panelboards at all times. Working clearance area may not be used for storage. Recommendations include using industrial vinyl safety tape to physically indicate clearance on floor/wall around panelboards.

Light Fixtures & Controls

Observations

A. Much of the interior lighting throughout the facility consists of a variety of T8 fluorescent or incandescent light fixtures, including recessed, surface, and pendant mounted varieties. The fixtures range in age but all are in good working condition.





Utility Transformer & C/T Cabinet



Classroom Lighting





- B. The gymnasium uses high bay metal halide fixtures to provide general lighting in the space.
- C. General lighting controls in rooms consist of toggle switches with no occupancy sensors or dual level lighting. Most classrooms utilize split area zones to split lighting controls in room.
- Corridor lighting controls consist of local toggle switches with no occupancy sensors. Staff indicated they prefer to turn off the corridor lighting circuit breakers to minimize efforts.
- E. There are no provisions for emergency lighting, except for a handful of wall mounted battery packs throughout the facility that provide minimal, non-code compliant light levels.
- F. Exterior lighting consists of high pressure sodium wall packs.
- G. Exterior lighting is controlled via a combination of photocell and time clock controls.

Recommendations

- A. Recommendations to interior lighting include replacing fixtures with LED equivalents, providing dimming controls and occupancy sensors to maximize on energy savings.
- B. Schedule existing exterior light fixtures with LED equivalents and control via existing timeclock/photocell controls.
- Corridors should be provided with occupancy sensors and light switches removed to automatically control the lighting and maximize on energy savings.
- D. If new LED lighting is provided, it is recommended that emergency lighting be provisioned through back up batteries integral to the normal light fixtures through egress paths and rooms with an occupant load greater than 50 persons. Alternatively, providing a new emergency generator system would be an alternative option to battery backup.

Wiring Devices

Observations

- A. Most receptacles throughout the facility are 15A rated.
- B. There was a general lack of receptacles throughout the facility. Facility staff indicated they have problems finding available receptacles often. Some classrooms only have 4 receptacles in the whole room.

Recommendations

- A. Recommendations include replacing existing 15A rated receptacles with 20A rated type.
- B. Provide additional recpetacles throughout working spaces as necessary to meet needs of space.







Gymnasium Lighting



Exterior Lighting

Phone System

Observations

A. The facility has a Shoretel IP based phone system that is in good working condition.

Recommendations

A. No recommendations at this time.

Data System

Observations

- A. Data service is provided via fiber optic utility service. The system seems to be in good working condition.
- Fiber optic wiring interconnects all of the schools to the main district network.
- C. General data cabling consists of a variety of Cat5e and Cat6 cabling, both in plenum and riser rated varieties.
- D. The school has (1) data rack, which has spare rack capacity for future needs. Data cabling management at the rack is run in a disorganized fashion with no labeling. There are also no provisions for backup power.



Data Rack

Recommendations

- A. It was unknown at the time of the site visit if the facility has ceiling plenums, but if there are plenums in the ceiling spaces, the riser rated data cabling should be replaced with plenum rated cabling.
- B. Data cabling at the data rack should be reinstalled in a clean workmanlike manner. Proper labeling of data cabling should also be considered to facilitate cable management and traceability.
- C. A possible recommendation is to provide a UPS battery backup system to provide backup power to the data rack in the event of power loss.

Keyless Entry System

Observations

- The building has a keyless entry system that is in good working condition.
- Access controlled doors are controlled via electric strikes and card readers.
- C. None of the exterior doors have door position contacts to monitor if doors are shut or left open.

Recommendations

A. It is recommended to provide door monitor contacts on all exterior doors to help monitor and control access to the facility at all times.



Card Reader & Intercom Box



Intercom System

Observations

- A. The building has a vintage Rauland intercom system that is past the end of its useful lifespan. Staff indicated that Rauland doesn't make parts for the unit anymore.
- B. Intercom speakers throughout are nearing the end of their useful lifespan.
- C. The bell schedule system is controlled via a timeclock. Staff reported no issues with system.



Intercom System

Recommendations

A. The existing intercom system should be scheduled for full replacement with a new IP-based intercom system. Existing speakers should be scheduled for replacement in addition to providing additional speakers in areas lacking coverage.

CCTV System

Observations

A. The building has a CCTV system consisting of 6 cameras throughout the facility. The system seems to be in good working condition. The district plans to add about 5 more cameras to the system in the future.



CCTV Camera

Recommendations

 Provide new CCTV cameras where additional coverage is necessary.

Fire Alarm System

Observations

- A. The building has a vintage fire alarm system that is about 15 years old and is in good working condition.
- B. The system is monitored and dials out to the fire department during a fire alarm event.
- C. Notification coverage is lacking by today's standards.

Fire Alarm Control Panel

Recommendations

 A possible recommendation would be to provide additional fire alarm notification devices in areas where coverage is lacking.

Other Low Voltage Systems

Observations

- The building does not have a security system.
- B. The building has a monitoring system to ensure the boilers in the facility are operational. The system is programmed to dial facility management in the event of a boiler failure.
- C. The building does not have a synchronized clock system.





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Recommendations

- A. Other possible recommendations include adding a security system to control and monitor access to the facility.
- B. Replacing the existing clocks with a synchronized clock system such as a GPS wireless clock system may be a recommended upgrade to minimize labor efforts required when updating clocks during daylight savings time changes.

