FACILITY ASSESSMENT REPORT
SPRINGFIELD PUBLIC SCHOOLS

Springfield, Minnesota

February 16, 2016

Project #16-18829

REPORT FOR:
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ISG

ARCHITECTURE + ENGINEERING + ENVIRONMENTAL + PLANNING

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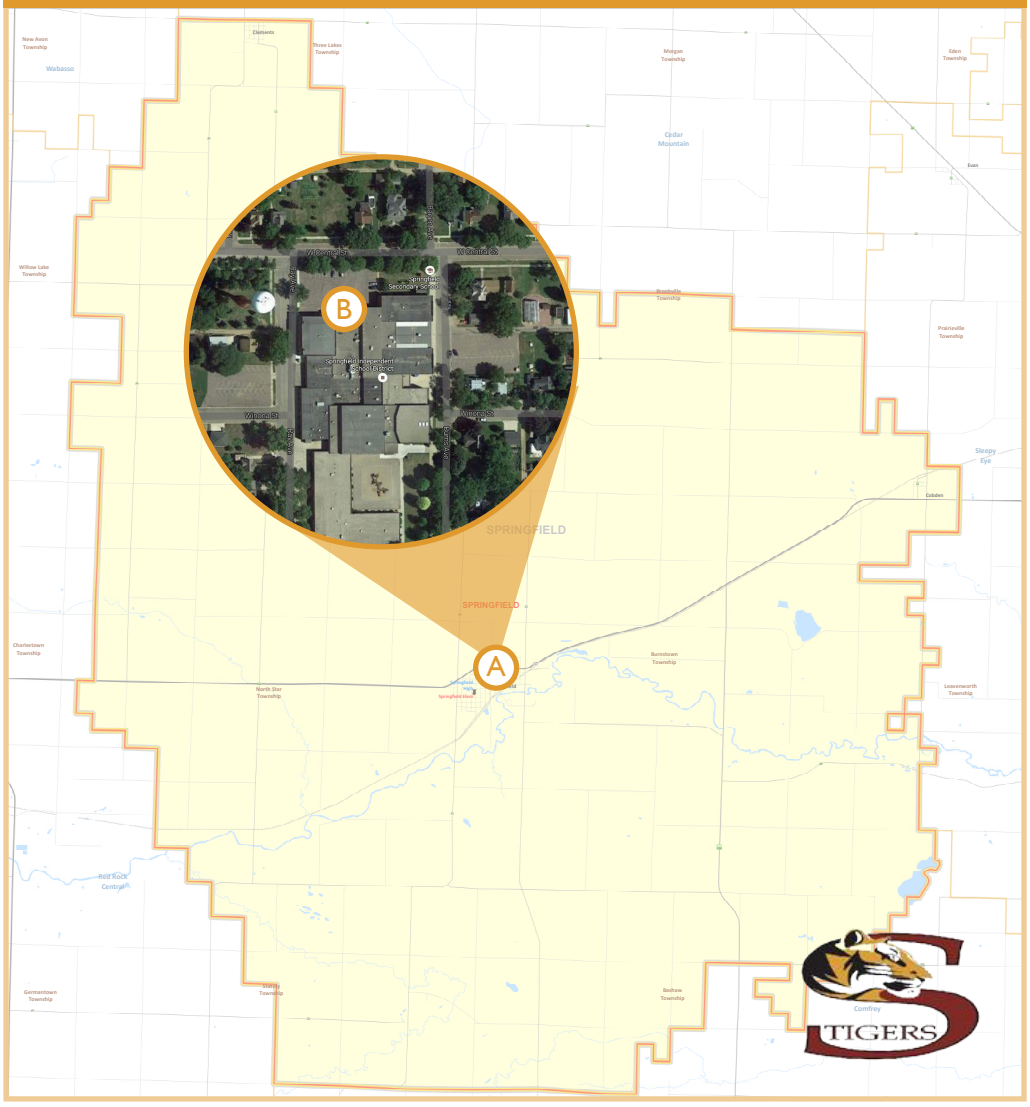
Executive Summary

INTRODUCTION

Springfield Public Schools is located in one central facility in Springfield, Minnesota, serving 650 students from preschool through twelfth grade. The entire south wing of the building is dedicated to the Elementary School and is comprised of Preschool through sixth graders, while the High School section of the facility is dedicated to seventh through twelfth graders. The facility is also home to the Independent School District (ISD) #85 office, a preschool program, and hosts many community education and recreation activities. The District also operates and maintains several support facilities for administrative, transportation, maintenance, and extra-curricular activities from this location. The site consists of one building, constructed circa 1908, which has been expanded to include several additions occurring through 1994.

SPRINGFIELD PUBLIC SCHOOL DISTRICT 85 MAP



DISTRICT SNAPSHOT

85%
Students entering kindergarten with kindergarten-ready skills

Top 15%
Springfield Elementary is recognized as a Reward School with a Grand Slam "4 in a Row", with the highest possible distinction for the Multiple Measurement Rating (MMR).

98%
Students earning a Springfield diploma

MAP LEGEND

A City of Springfield

B Springfield Public School
12 South Burns Avenue
Springfield, MN 56087

Executive Summary

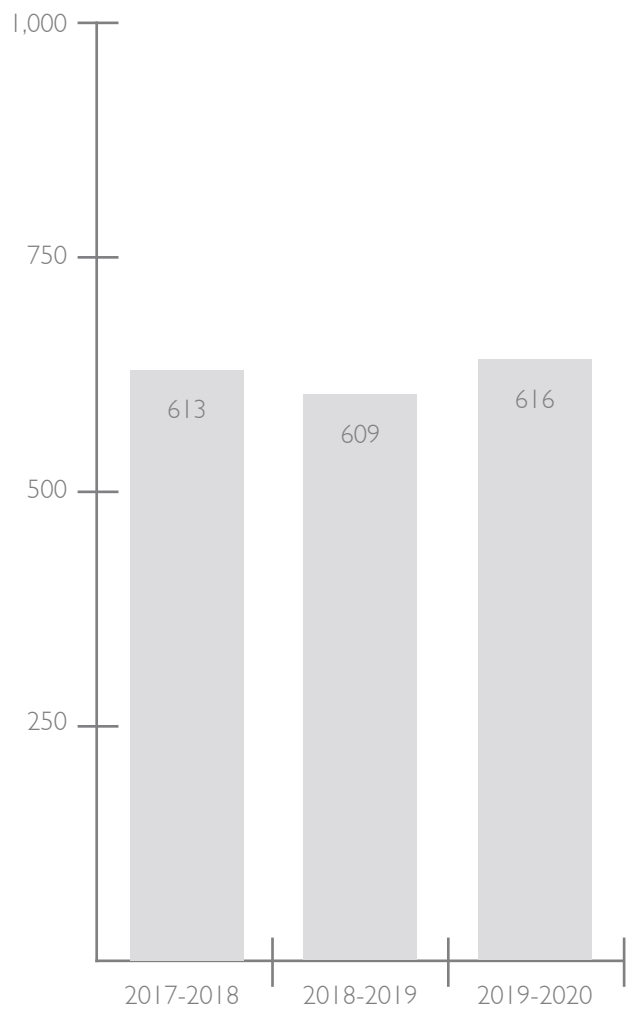
ISG's multi-disciplinary team visited Springfield Public Schools to perform a comprehensive site and facility evaluation. This included an analysis of existing conditions and considerations of the site, interior and exterior building, plumbing, mechanical, and electrical conditions, as well as security, technology, and programmatic considerations. A space needs assessment was also conducted to quantify the student/space ratio for the variety of uses throughout the facility. In addition to educational uses, the assessment also considered extra curricular, community education, and recreational uses and schedules for the facility.

Prior to the site assessment, District staff informed ISG of a variety of concerns at the facility. While none of these concerns required immediate relocation of staff or students and do not pose any threats to the occupants of the building, a list of priority items were identified based on several important factors. These include life safety, deterioration, health, accessibility, hazardous materials, energy, and aesthetics. The priority level and proposed time frame to address each item are identified in a table at the end of this report.

SUMMER 2016 UPDATES

- ☑ Site + parking expansion
- ☑ Voice/IP phone system
- ☑ Fire Detection System Replacement
- ☑ Replacement of exterior lighting wall packs with LED

DISTRICT ENROLLMENT PROJECTIONS



SPRINGFIELD PUBLIC SCHOOL GOALS

SUPPORT POSITIVE FINANCIAL STABILITY OF THE SCHOOL DISTRICT

+

ENSURE A HIGH PERFORMING WORKFORCE AND INCORPORATE CONTINUOUS IMPROVEMENT AT ALL LEVELS

+

CREATE AND FOSTER AN ENGAGING AND RESPECTFUL LEARNING ENVIRONMENT

Executive Summary

SCOPE OF EVALUATION

The following assessment considers information gathered from field observations, review of existing plans, and information provided by District staff and school personnel. The assessments performed on site were limited to nondestructive, visual reviews of existing systems. No destructive testing or investigations were performed. Existing information and plans were made available to ISG by Springfield Public School for review. The following categories were reviewed within the scope of this assessment:

SITE CONDITIONS

Site Conditions
Review of the existing building site including parking spaces, concrete walks, and other horizontal site elements. Site circulation, grading, paving, parking, stormwater, and playground space were also reviewed.

Exterior Building Conditions
Review of the building's exterior shell including an assessment of the structure, foundation, exterior walls, windows and doors, and thermal efficiency as well as conditions of the existing roof, gutters, and downspouts.

Interior Building Conditions
Examination of the finishes, equipment, and other conditions found in classrooms, offices, hallways, gymnasiums, locker rooms, stairwells, kitchen, and cafeteria areas.

Life Safety Conditions
Review of life safety, egress, and potential code deficiencies as discovered during field observation. Also includes conditions of the fire alarm system.

Hazardous Material Conditions
Identification of potential hazardous material noted during visual field observations.

Accessibility Conditions
Review of the existing structure for conformance with the Minnesota Accessibility Code. Site parking, access into the building and entrances, accessibility routes inside of building, and restroom accessibility were considered.

Plumbing Conditions
Review of the existing building plumbing systems including water service, water fountains, sinks, toilets, and showers.

Mechanical Conditions
Review of existing mechanical systems and their components including verification that HVAC systems, as well as plumbing fixture counts, water piping, and water supply meet current building codes.

Technology Conditions
Review of the building information technology system including network documentation, backup procedures, firewall, software, security, and technical support.

Electrical Conditions
Review of the existing building electrical systems including electrical service, distribution, and lighting. This section also documents technology systems and components including the security system and others as applicable.

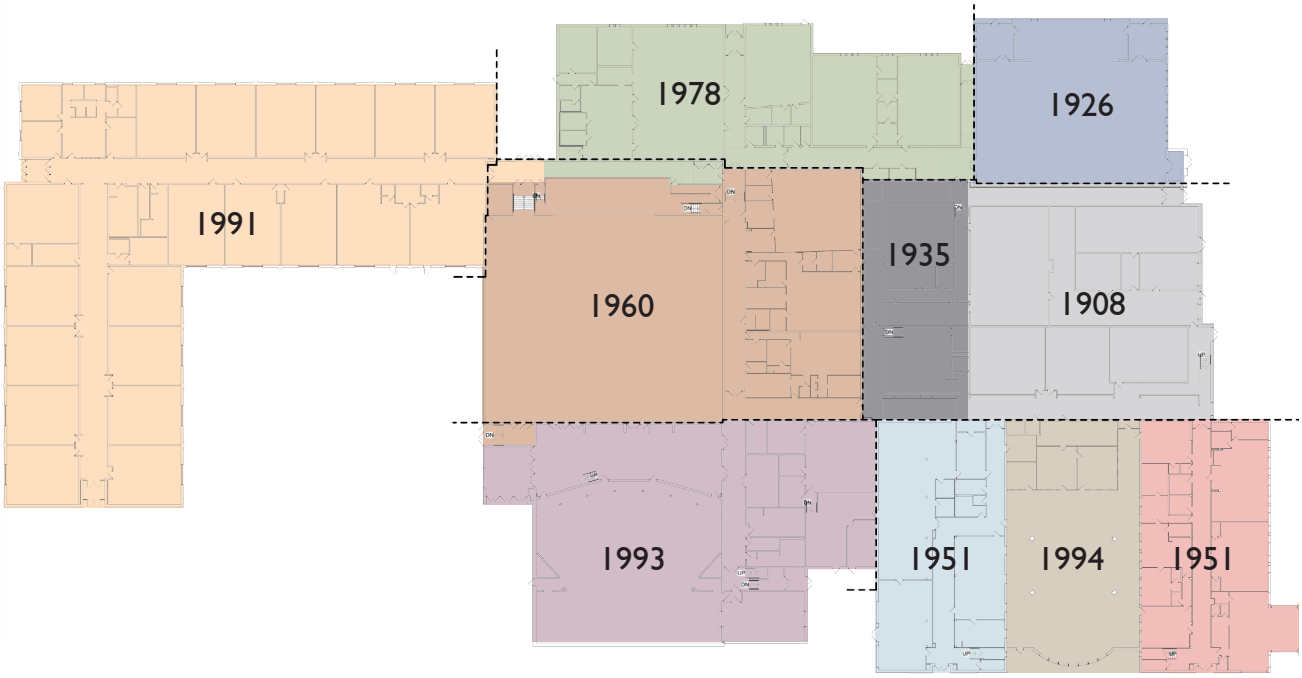
Security Considerations
Assessment of the existing security equipment installed throughout the building. Review of existing primary entryways into the facility including door locations and visitor access.

SITE LOCATION + BACKGROUND INFORMATION

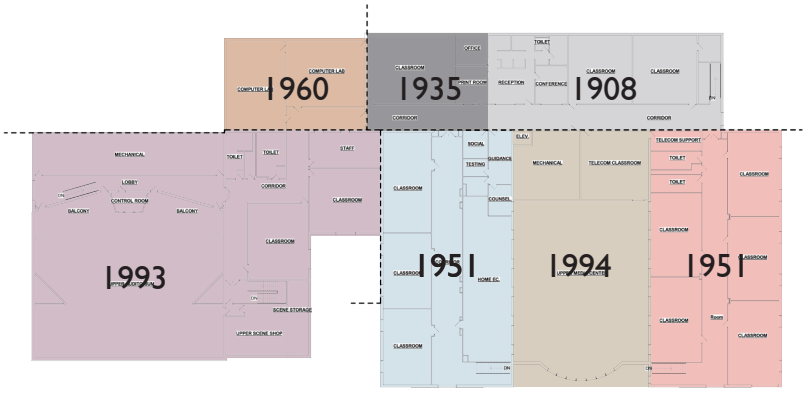
Located on two city blocks in a predominantly residential neighborhood, the Springfield Public Schools building was constructed circa 1908 at 12 Burns Avenue in Springfield, Minnesota. With an increase in student enrollment, the facility expanded with multiple additions over the last century. The first addition in 1922 (not shown on map) provided the building with a new larger boiler room. In 1926, the space that is now the Elementary School Gym was added. Other additions in 1935, 1951, 1960, 1963, 1978, 1991, 1993, and 1994 make up the current facility, which totals approximately 168,450 square feet.

ADDITIONS TO SPRINGFIELD PUBLIC SCHOOLS

First Floor Additions



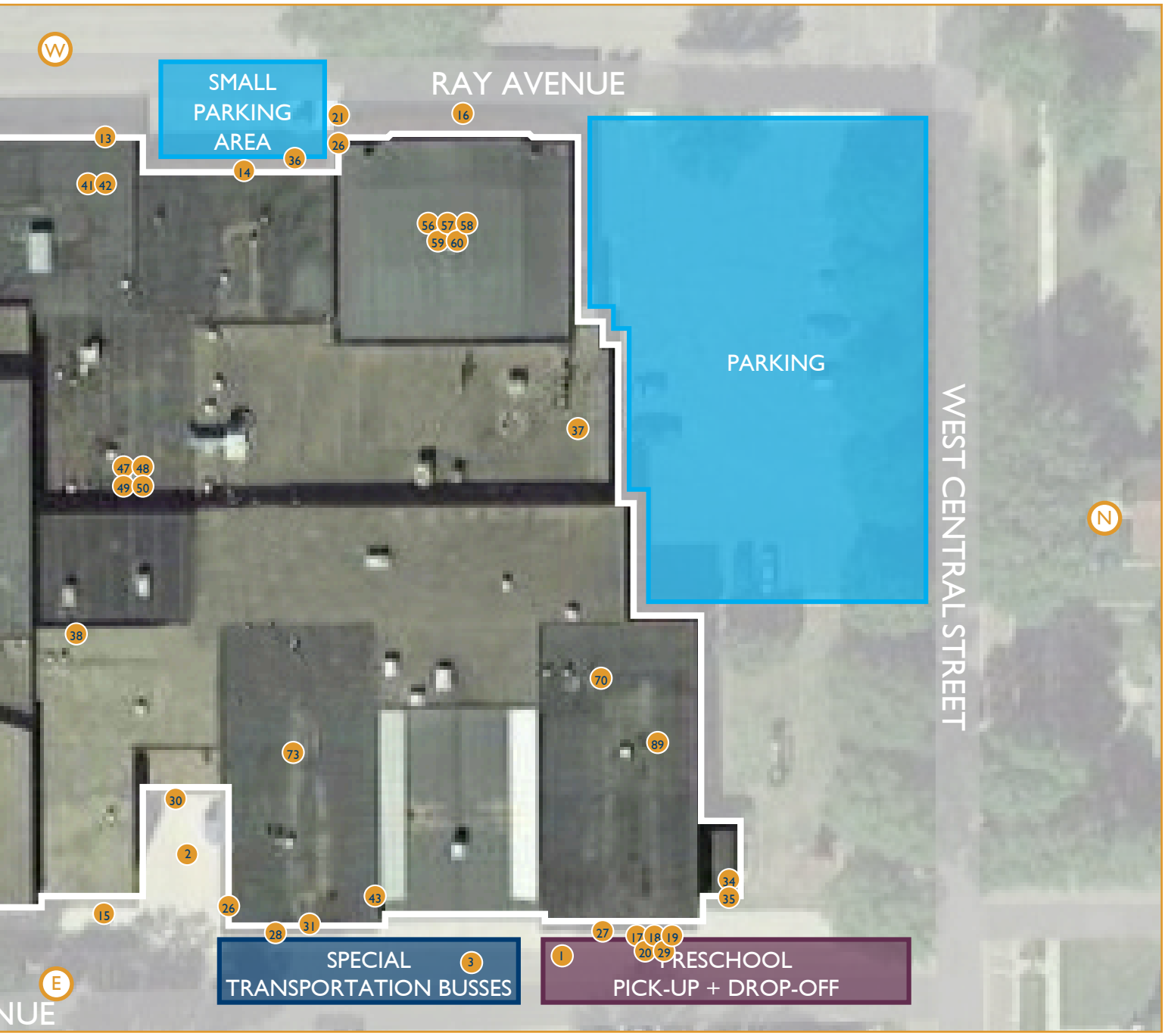
Second Floor Additions



TRAFFIC PATTERNS AND VEHICLE ACTIVITY

While a complete traffic analysis was not completed, observation of traffic patterns, parking, busing, and student drop off indicated that trafic volumes are spread around the perimeter of the facility. Parent pick-up and drop-off for Elementary School students is located on the south side of the facility, while bus loading areas are located around the corner on the west side of the facility. Tiger Cub

Existing Conditions + Considerations



Note: Numbers represent many, but not all existing condition photos identified on pages 8-31 of this report.

Preschool pick-up and drop-off, and special transport van/bus loading is located on the northeast side of the facility. Pocket parking areas are located on the south, east and west sides of the facility with a new lot across from the main entrance on Burns Avenue. The High School student drop off area is located along the east, nearby the Preschool pick-up and drop off area.

EXTERIOR SITE CONDITIONS

Overall drainage of site is adequate and poses no issues to the building or the surrounding area. The traffic flow for morning and afternoon drop-off includes 380 students being bussed each day. Teacher, staff, and visitor parking as well as parent drop-off areas, and sidewalks for students who walk and bike to school also play an important part of the daily traffic flow.

Concrete and Paving

Concrete walks surround the building, providing easy access for students and faculty to walk around the exterior perimeter of the school. Most sidewalks around the school are in fair condition and require minimal repair. However, in locations of heavier traffic, the concrete shows sign of wear. These locations are illustrated in Figures 1-3 and are described as follows:

- The east sidewalk near the northeast corner of the block shows signs of deterioration. Large cracks, spalling, and discoloration of concrete are due to normal wear and potential salt erosion (see Figure 1).
- The east side of the building has a bay for truck deliveries with access to the Shop and Theater. The concrete in this area is sunken and cracked due to heavy equipment and delivery trucks unloading and parking here. When this concrete pad was originally placed, it was most likely not designed for present-day heavy equipment and large deliveries. It was not reinforced to accommodate the increased load, resulting in settled concrete and cracks (see Figure 2).
- In front of the High School entrance on the east side is an accessible ramp that shows signs of deterioration requiring repair (see Figure 3).
- Cracks, spalling, and stained concrete are apparent on the west concrete walk outside of door W8. This location is in need of new concrete walks and concrete curbs (see Figures 4 and 5).
- At entrances E12 and E13, uneven concrete is an accessibility concern for students entering the playground (see Figures 6 and 7).

Figure 1 - East sidewalk existing conditions

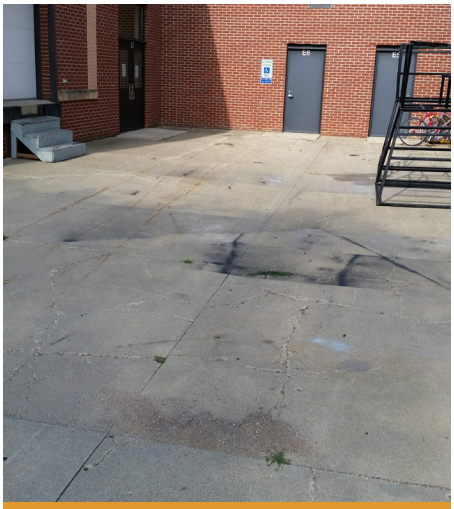


Figure 2 - East side truck loading area concrete conditions

Figure 3 - East side sidewalk accessibility ramp

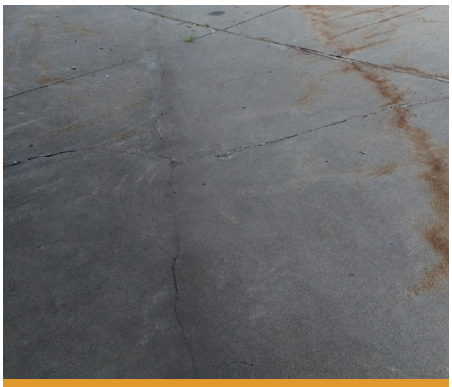


Figure 4 - West side sidewalk condition

Figure 5 - West side sidewalk condition

Existing Conditions + Considerations

- The playground equipment designed for the Elementary School is in very good condition and promotes "Tiger Pride" using maroon and gold colors (see Figure 8).
- The surrounding asphalt is in poor condition with cracks, patching, and an overall uneven surface. There is an area near the north basketball hoop where an 8" hole is marked by a cone. This hole poses a safety concern to students playing in that area (see Figure 9).

Playground

The pebble rock in the playground area is not well contained by the existing concrete border. With the replacement of the asphalt pavement, new playground rubber flooring or chips should be installed to provide students with a safer material to play on, longer lifespan, and less overall maintenance for staff (see Figure 10). Currently, the District leases adjacent Brown Park for additional playground space.

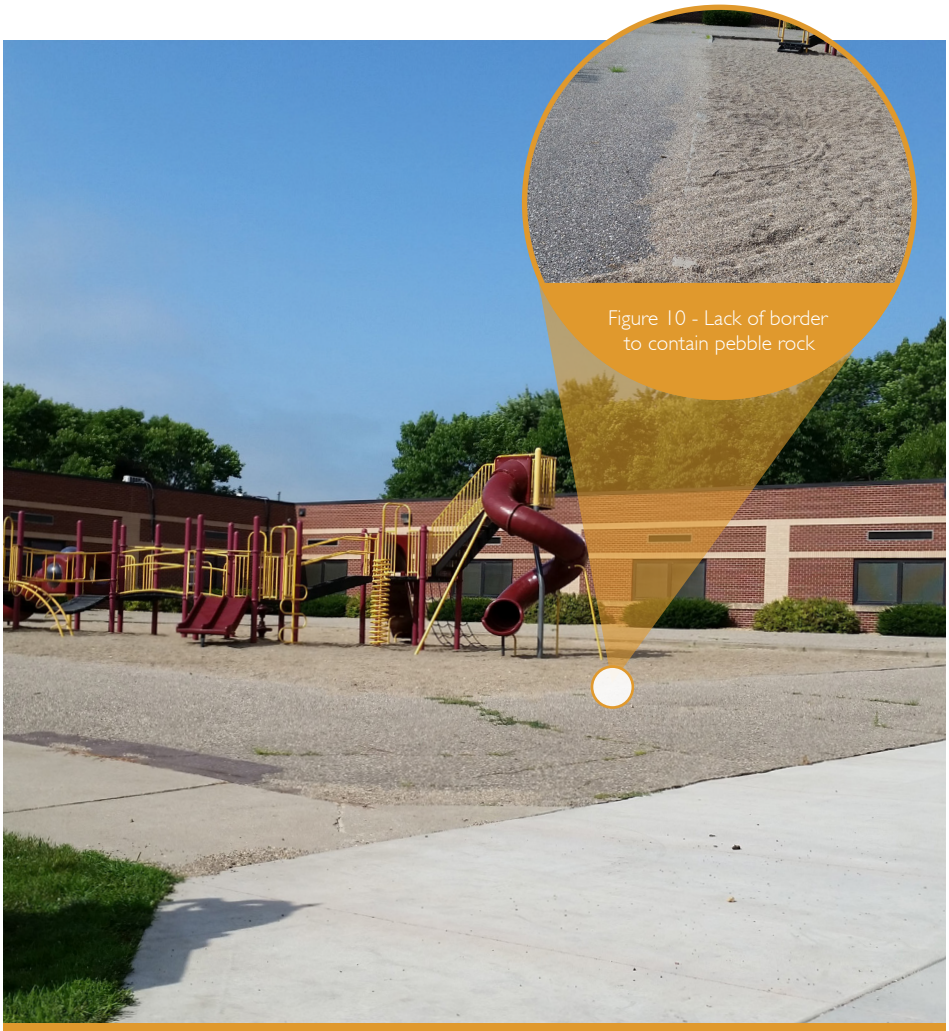


Figure 10 - Lack of border to contain pebble rock

Figure 8 - Existing Elementary School playground

Figure 6 - Entrance at door E12

Figure 7 - Entrance at door E13

Figure 9 - Clean-out hole safety hazard in asphalt paving

Existing Conditions + Considerations

Located near the playground is a small bell memorializing the establishment of Springfield Public Schools in 1908. The bell is in very good condition and provides appropriate historical appreciation. The masonry column that supports the bell shows brick deterioration and should be restored. The stone plaque that reads '1908' should be cleaned at the same time (see Figure 11).

The southeast corner of the Elementary School has an elevation change of about three feet. Stairs connect the concrete walks at both elevations. The stairs are in good condition and the railing is structurally sound but has areas of chipped paint (see Figure 12).

The west side of the building has two bicycle racks for students to secure their bikes during the school day (see Figure 13). The racks are bent and rusting. To provide students with a safe place to lock their bikes, two new racks should be installed. Set-in ground racks will provide a reliable long lasting solution.

On the west side of the building there is a small parking lot with six stalls. The pavement and striping are in poor condition, and the lot is in need of repaving. The concrete curbs at the front of each stall are in good condition and can be reinstalled after new pavement installation (see Figure 14).

Off street parking can be found in four locations around the site. There is a parking lot at the northwest corner of the school and on the previously mentioned west side (six stalls). There is also a parking area on the east side across the street and one on the west side across the street. Inadequate parking capacity and other parking issues are currently being resolved with the expansion of the east parking lot.

Landscaping around the building, including bushes, a rock bed, and trees, is in very good condition and helps the school blend well into the surrounding residential neighborhood. Minimal continued maintenance of the landscaping will provide the site with a clean and well-kept appearance (see Figure 15).

Figure 11 - Memorial Bell

Figure 12 - Existing stair railing

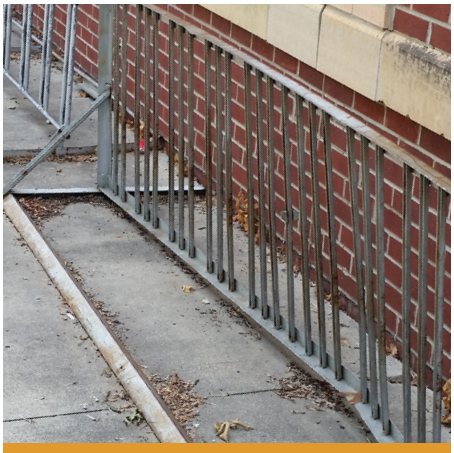


Figure 13 - Existing bike racks

Figure 14 - West side parking area

Figure 15 - Existing landscaping

EXTERIOR BUILDING CONDITIONS

The exterior building material is a combination of several varieties of colored brick and stone block (see Figures 16, 17, and 18). The majority of the brick is in good condition. Most stone is also in good condition, however, it was noted that stone in several locations is in need of cleaning (see Figures 19 and 20). On the west side of the building at the gym, stone blocks are installed at the ground elevation. One corner stone is deteriorated and should be replaced (see Figure 21). All other stone appears to be in good condition.

Figure 16 - West exterior building elevation

Figure 17 - East exterior building elevation

Figure 18 - Exterior building elevation

Figure 19 - Exterior stone

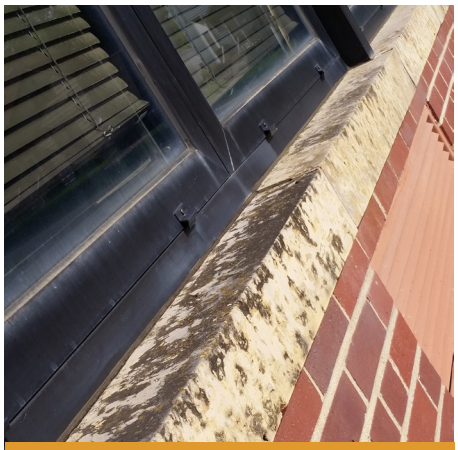


Figure 20 - Existing exterior stone sills

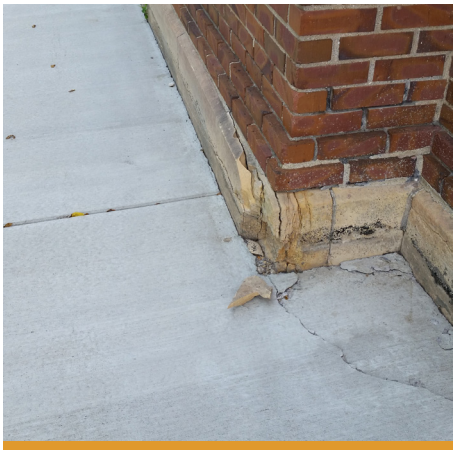


Figure 21 - Deteriorating exterior stone on west side near Gym

Existing Conditions + Considerations

The west side of the Elementary School wing has multiple locations where grout is chipping out of stone joints (see Figures 22 and 23). In the same locations, caulk has shrunk between brick control joints resulting in gaps (see Figures 24 and 25).

On the east side of the building, in the truck loading dock, brick has been damaged due to being struck by vehicles (see Figure 26). Brick replacement can be performed to return the brick to its original appearance. In some locations, cracks in the brick are four to ten feet long. At these locations tuckpointing is recommended, which will significantly reduce further damage (see Figures 27 and 28).

Building signage appropriately identifies the different functions of the building. Signage consists of white lettering on the face of brick walls. All signage is in excellent condition and requires minimal cleaning (see Figure 29).

Figure 22 - Deteriorating grout

Figure 23 - Deteriorating grout

Figure 24 - Void in exterior caulk joint

Figure 25 - Voids in exterior caulk joint

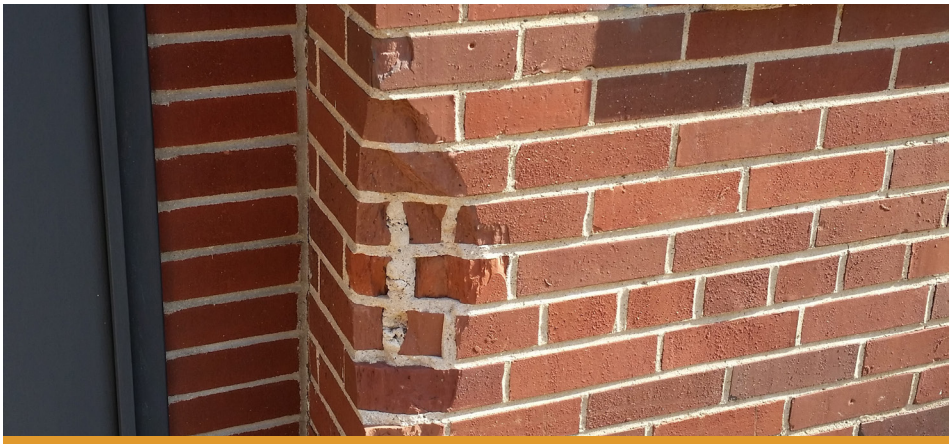


Figure 26 - Existing brick conditions

Figure 27 - Cracked brick location

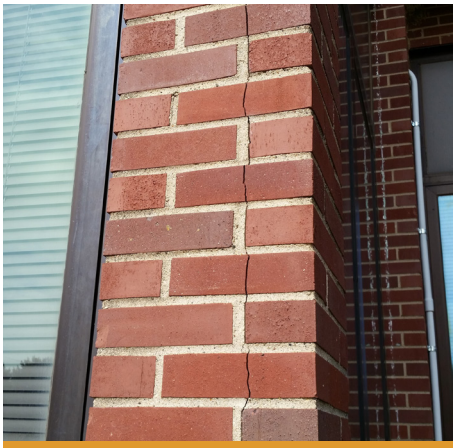


Figure 28 - Cracked brick location

Figure 29 - Existing building signage

Doors

Exterior doors are constructed with hollow metal frames and glass lites. Overall, exterior doors appear in fair condition with minimal rusting. All doors are faded due to sun exposure and would benefit from new paint (see Figures 30 and 31). It should be noted that Door W8 specifically shows signs of rust and the handle on the northernmost door is damaged. Door W8 should be replaced (see Figure 32).

A door on the north side of the building poses a safety issue since the metal sweep at the bottom is bent back and sticking out. Replacement of the sweep would resolve the issue (see Figure 33). Many of the existing exterior doors are in need of weather seal replacements.

Figure 30 - Exterior door

Figure 31 - Existing exterior doors

Figure 32 - Existing exterior door W8

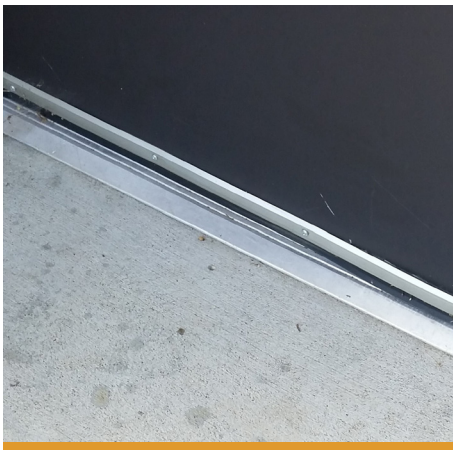


Figure 33 - Damaged mounting track for sweep

Windows

The majority of windows in the school are operational aluminum windows. Most appear to be in working condition with no signs of rust, broken glass, or deterioration. School personnel identified some leaking windows due to incomplete sealing. Seal replacement at these locations is recommended (see Figures 34 and 35). Additionally, hardware repair is needed at several windows throughout the facility.

A second window type is a Kalwall system which is located in the Elementary Gym. Kalwall is sandwiched fiberglass reinforced polyester panel. This particular window type is an older system and inefficient for heat retention. Replacement of this window type would result in better control of temperature in the gymnasium and provide day lighting in the gym (see Figure 36).

Figure 34 - Typical exterior window

Figure 35 - Exterior window

Figure 36 - Kalwall window type

Existing Roof

Utilizing records of roof replacement dates provided by the District, as well as a roof audit report completed in 2009 by Tremco Companies, ISG completed site verifications of the existing roof and observed interior damaged ceiling tile below the roof structure, indicating previous and/or current leaks.

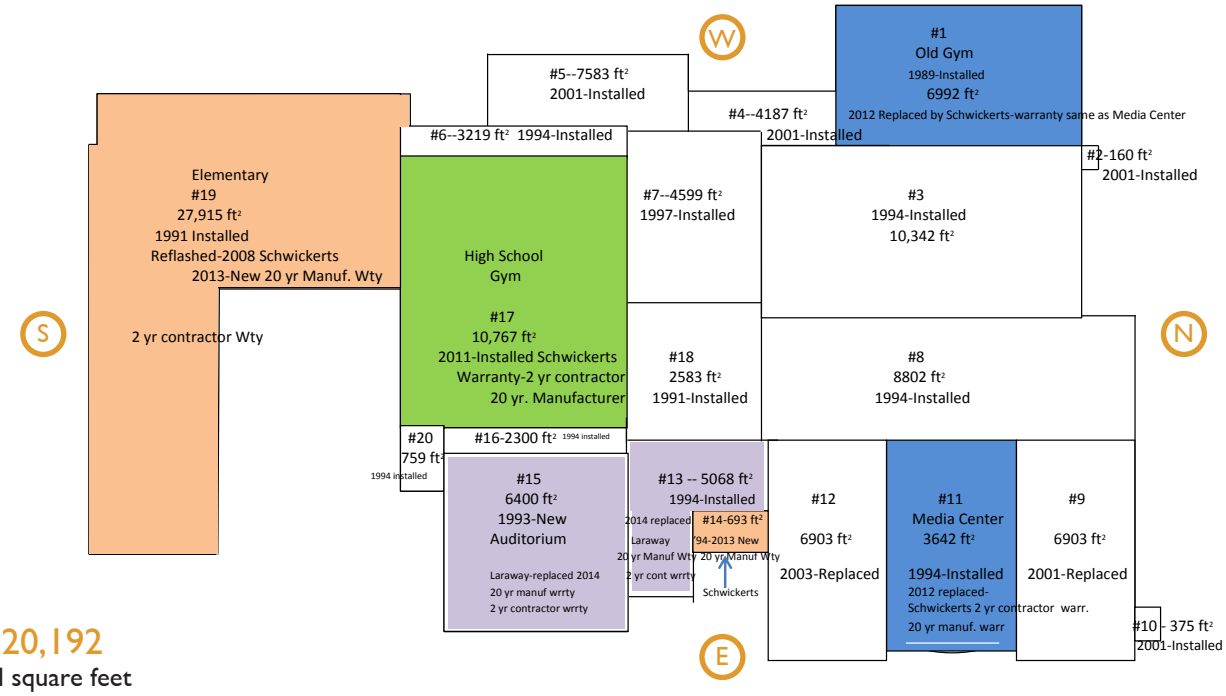
The existing roof systems on the building include a combination of fully adhered, mechanically fastened, and ballasted EPDM (rubber) roof membrane systems. There is no available documentation explaining the reasoning for using different roof systems for each portion of the building. However, industry standard during typical roof replacement projects note to avoid installing heavier roof systems as sometimes the existing structure may not have the capability of carrying the additional load. Weight and costs are typically used in selecting the roofing type and may be the reasoning for past decisions.

Based on records and site observations, it appears that approximately 60,000 SF of roofing was replaced within the last 5 years. This comprises nearly 50% of the building's roof system. The replaced areas are located above the Elementary Gym, Media Center, High School Gym, Auditorium, Elementary Wing, and a few other minor areas. The flat, EPDM systems requires ongoing maintenance and replacement approximately every 20 years. Budgeting for roof replacement costs is often challenging for school districts, and as a result, many roof systems are continually repaired until long after their useful lifespan expires.

Site observations noted stained ceiling tile locations. This information often assists with confirmation of areas requiring roof replacement. However, once roof replacement is completed, often times stained ceiling tiles remain, making it difficult to know if staining is the result of past or current leaks. Therefore, for the purpose of this report, the stained ceiling tile adjacent to roofing areas replaced in the past five years were not considered as the current leaks.

There are other areas of the building where roof sections have not been replaced which have stained and damaged ceiling tile from water penetration. These locations, including classrooms and corridor on the second floor just north of the new gymnasium, south entrance vestibule to the auditorium, and cafeteria ceiling, should be considered for replacement. It was also noted that several areas of roofing previously identified for replacement are still pending.

SPRINGFIELD PUBLIC SCHOOL ROOF REPORT



Based on these considerations, it is recommended that the majority of the remaining roof square footage be replaced within the next five years. Following is a proposed roof replacement schedule.

PRIORITY	REPLACE EPDM (RUBBER) ROOFING
Priority 1 2018-2020	46,785 SF
Priority 2 2021-2023	11,930 SF

INTERIOR BUILDING CONDITIONS

Due to the layout of the expansive facility, resulting from multiple additions and uses, the interior conditions portion of this report is separated by sections.

High School

The main entrance area empties into an open hallway. This area would benefit from a more secure vestibule area for visitors and students.

The north wing of the High School consists of both a first and second level with the following spaces: a science wing, small gymnasium, main gymnasium, library, wood shop, and auditorium. The interior of the building is generally in good condition.

The facility maintenance area in the north wing would benefit from the addition of storage shelves to make the area safer for employees and ensure hazardous materials are stored properly (see Figure 37). The athletic concession stand is in good condition, however, all equipment in this area should be upgraded from laminate to stainless steel (see Figure 38).

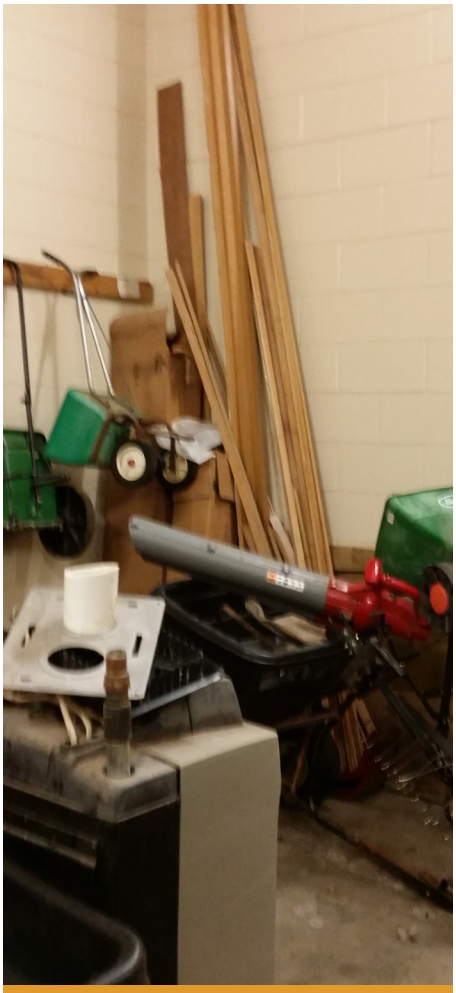


Figure 37 - Equipment stored in facility maintenance area

Figure 38 - Existing concessions stand cabinets

Classrooms

Many classrooms are equipped with updated technology. In some locations, classrooms were updated and need no additional work. The north wing classrooms on the second floor have built-in cabinetry that would benefit from being updated.

Carpet is in good condition in most classrooms. In four classroom locations, carpet replacement is recommended. In a few other locations, 9x9 flooring tile was noted, which is indicative of the potential presence of asbestos. See the Hazardous Material Conditions section for more information on asbestos issues.

Wall paint in classroom locations is in good condition and does not require much more than continued maintenance. Minor touch up can be provided by school staff as necessary. In many locations, acoustical ceiling tiles (ACT) are stained from past roof leaks. These tiles should be removed and replaced to provide the school with improved appearance (see Figures 39 and 40).

The Music Room on the first floor includes a choir riser system that requires a guardrail for safety when above the finished floor level (see Figure 41). The Choir Room has acoustical panels on the wall to absorb sound. The panels are outdated and could use an upgrade. (see Figure 42).

Stairwells

The High School has five stairwells going up to the second level and two additional half-size stairs on the main level.

The stairway on the north wing of the building has tile on the walls that has broken off and needs replacement. There is also a patch on the wall that needs to be cleaned and painted to blend better into the existing wall (see Figures 43).

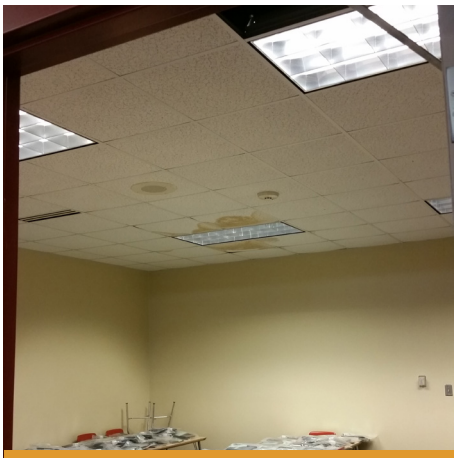


Figure 39 - Stained ceiling tiles

Figure 40 - Broken ceiling tile

Figure 41 - Choir risers

Figure 42 - Acoustical panels in Choir Room

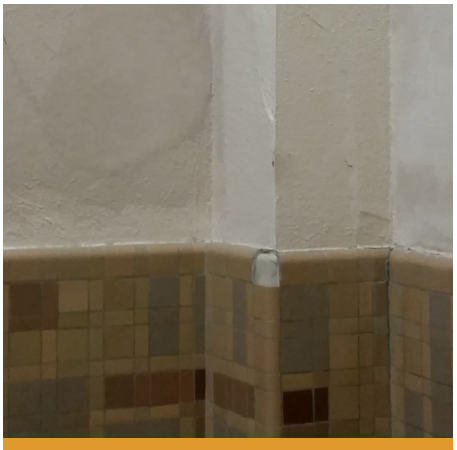


Figure 43 - Existing stairwell landing wall finishes

Main Gymnasium

The main gym for the High School is located centrally in the building. Improvements were recently made with the replacement and installation of new plastic viewing bleachers. The wood floors in the gym are in excellent condition. There is a folding curtain wall that separates the gym into two smaller areas. This curtain is in low performing condition and should be replaced within the next five to ten years (see Figures 44, 45, and 46).

Boy's Locker Room

The Boy's Locker Room is adequately sized for the amount of student athletes in the school. The locker bay area provides adequate storage of equipment and student belongings (see Figures 47 and 48).

Figure 44 - Existing main Gymnasium

Figure 45 - Existing main Gymnasium

Figure 46 - Existing Gymnasium curtain wall

Figure 47 - Boy's lockers

Figure 48 - Boy's lockers and changing area

The shower area is located in a separate room accessed from the main locker room area. The flooring is sloped toward a drain allowing water to drain properly from the showers. The concrete floor and tile walls in the shower area could be upgraded (see Figures 49 and 50). The boy's locker room shower area does not meet current ADA codes. The entry door into the shower area is currently too narrow to accommodate accessibility. ADA codes also require reconfiguration of shower head locations. Floor drain locations will need to be reconfigured if shower head locations move, a trench drain is recommended.

Elementary School

The elementary wing is located in the building area to the south of the double doors which separate K-6th grades from the junior/senior high.

Classrooms

The Elementary School wing (south addition) is one of the newest additions. The hallways and offices are also in excellent condition (see Figure and 51).The classroom finishes are all in excellent condition with the exception of several classrooms that would benefit from carpet replacement (see Figure 52).

Stairwells

The stairway on the south wing of the building is in excellent condition. The rubber treads on the stairs are in nearly new condition and do not require modification (see Figures 53, 54, and 55).

Elementary Gymnasium

The smaller gym used for the Elementary School students is one of the oldest areas of the building. Renovations have been made to this area to update the space with school branding (see Figures 56, 57, 58, and 59). The windows in this area need to be replaced as mentioned in the exterior category (see Figure 60).

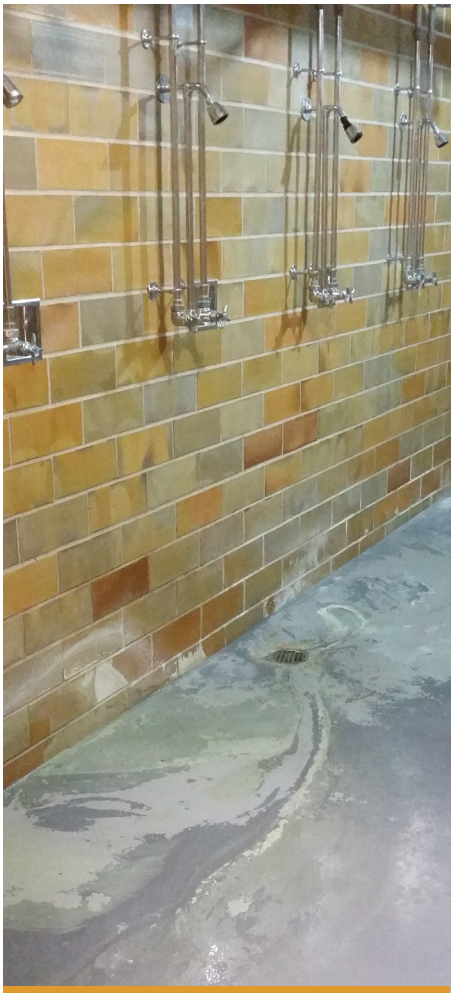


Figure 49- Boy's Locker Room showers

Figure 50 - Boy's Locker Room showers

Figure 51 - Elementary hallway

Existing Conditions + Considerations

Figure 52 - Elementary classroom

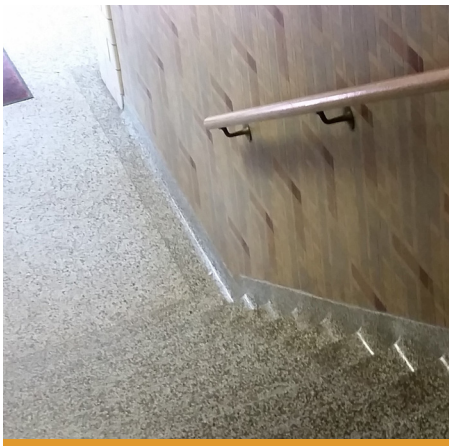


Figure 53 - Existing stairwell

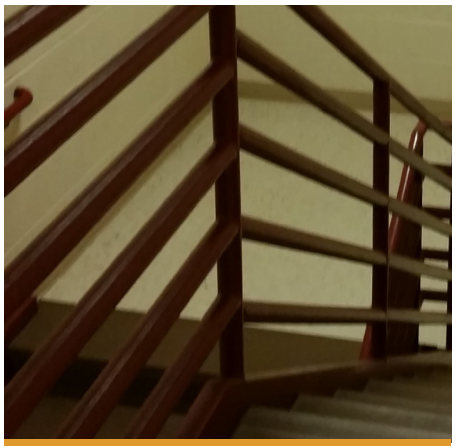


Figure 54 - Existing stairwell

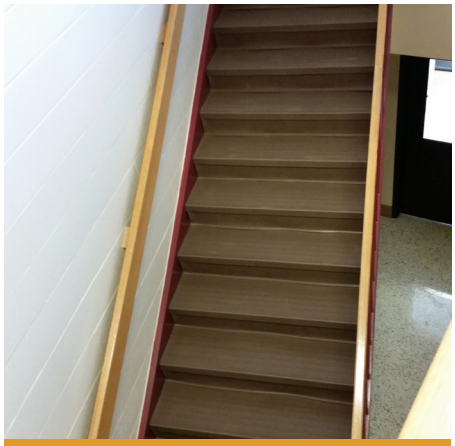


Figure 55 - Existing stairwell

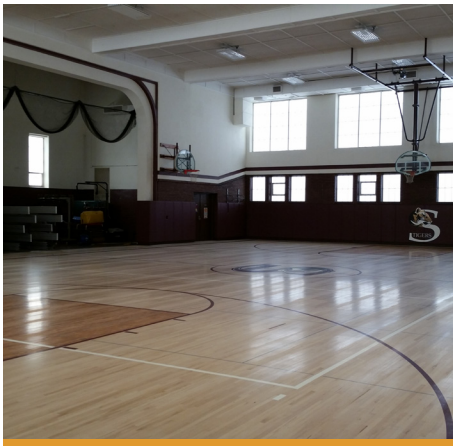


Figure 56 - Elementary Gymnasium

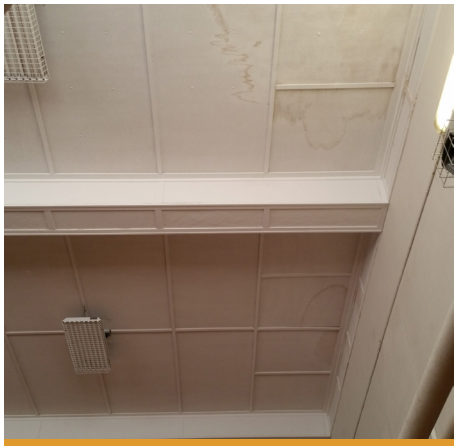


Figure 57 - Elementary Gymnasium ceiling

Figure 58 - Elementary Gymnasium

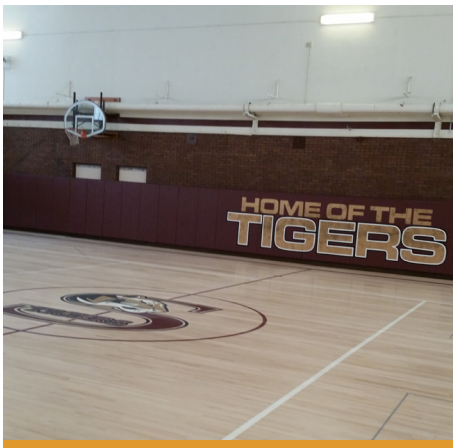


Figure 59 - Elementary Gymnasium

Figure 60 - Kalwall windows in Gymnasium

General

Throughout the building, there are multiple stained ceiling tiles that need to be replaced. Replacing stained tiles will help determine which areas have current moisture problems and what roof leaks were previously resolved (see Figures 61 and 62).

Water fountains throughout the school include new and old fixtures. Continuation of upgrades until all original water fountains are replaced will achieve compliance with building code (see Figure 63 and 64).

Hallways

Hallways currently provide adequate circulation throughout the school and do not pose large traffic issues. Hallway floors are kept up nicely and waxed annually. The walls in the hallway areas are also in good condition. Lockers line some hallway areas and while in working condition, due to their age and condition, locker replacement should be considered in the near future.

District Office Spaces

The main District office is located on the first floor of the north wing. The office was recently renovated and provides the District with adequate space to operate efficiently. A storage closet in the office has 9x9 floor tile that poses a concern for asbestos. See the Hazardous Material Conditions section for further considerations.

Kitchen

The Kitchen was upgraded during the summer of 2016 with new flooring (see Figures 65 and 66). Due to construction, ISG was only able to view the interior of the space from outside of the kitchen. The new flooring installed in the kitchen was well done and will be a quality improvement for the school. There was a food prep cart in the cafeteria that had painted metal cabinetry under the counter top, this not code compliant and should be replaced with a full stainless steel prep stand (see Figure 67). The ACT in the kitchen is perforated and by code needs to be a hard washable type. Replacement of ceiling grid will bring it up to code (see Figure 68).

Figure 61 - Stained ceiling tiles

Figure 62 - Stained ceiling tiles

Figure 63 - Original drinking fountain

Figure 64 - Updated electric water cooler

LIFE SAFETY CONDITIONS

The school provides students and faculty with adequate egress in its current configuration. Both exiting and egress appear to be in compliance.

The existing building contains a partial fire suppression system. The existing elementary wing, along with the most recent building additions of the large gymnasium and auditorium area, contain an automatic fire sprinkling system. The north portion of the building containing the High School, Junior High, and District Offices does not have an existing automatic fire suppression system. Per current building code standards, this area requires a fire suppression system.

A copy of the State Fire Marshal Inspection and Compliance Orders dated April 22, 2016, was provided to ISG by the District. The Fire Marshal flagged many minor items that the District has likely already addressed; however, while there is a partial fire sprinkler system the report stated, "It is recommended that the entire building is upgraded to a complete fire sprinkler system."

The existing fire detection system is over 20 years old and replacement is recommended. A good time to do this would be during the installation of a fire suppression system throughout the remaining building. It was also recommended to replace the stage curtains due to being 20-years old.

Figure 65 - New kitchen flooring

Figure 66 - New kitchen flooring

Figure 67 - Existing non-compliant food prep cart

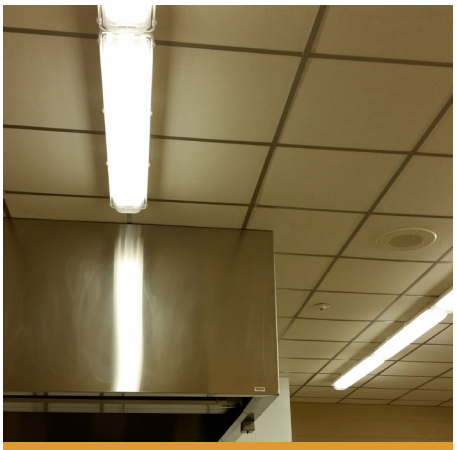


Figure 68 - Existing kitchen ACT

HAZARDOUS MATERIAL CONDITIONS

The presence of asbestos is anticipated in floor tile and wall locations throughout the building. Improvements to the building may require disturbance of these locations, and proper asbestos removal procedures will be required. The locations of these floor tiles include various supply closets on the northeast corner of the first floor and classrooms on the northeast second floor, wall locations in the northeast preschool classrooms, and Boy's Locker Room office. Hazardous material assessments should be scheduled in conjunction with any future renovation work within these respective areas (see Figures 69, 70, 71, and 72). Without an official hazardous material inventory completed by a licensed hazardous material inspector, total inventory and costs cannot be determined at this time.

Figure 69 - Potential asbestos containing materials in walls

ACCESSIBILITY CONDITIONS

The existing ramp entering the building from the northeast corner does provide required accessibility, however new handrails on each side should be provided. All other areas of the building are accessible via the use of ramps and elevators. Exits from the facility also provide adequate egress.

The elevator is located in the west side of the second floor and center of the first floor. The elevator provides the required accessibility to the second story. The Elementary School is all one level. In the Technology Education Department there are doors with knob style handles. Building code requires all door handles to be lever style (see Figure 73).

Almost every restroom lacks accessibility in accordance with ADA standards. The last stall in the restroom, which is commonly considered the accessible stall, should be 60" wide by 78" deep. To accommodate these dimensions, revisions of the restroom layouts are needed (see Figures 74 and 75).

The boy's Locker Room shower area does not meet current ADA codes. The entry door into the shower area is currently too narrow to accommodate accessibility. ADA

Figure 70 - 9x9 floor tile in janitor closet

Figure 71 - Typical 9x9 floor tile

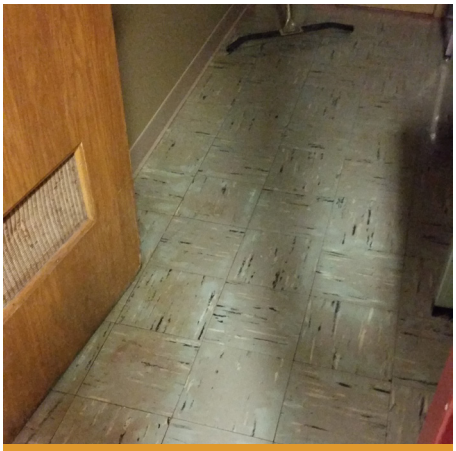


Figure 72 - Typical 9x9 floor tile

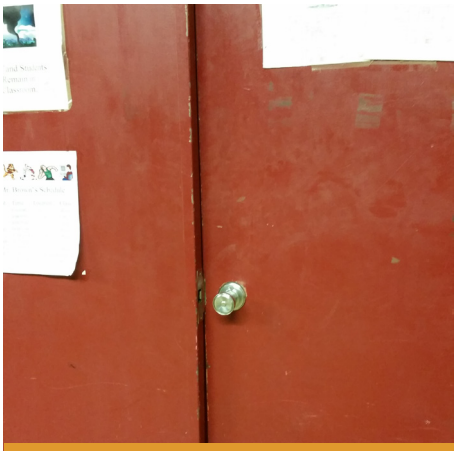


Figure 73 - Knob style door hardware

codes also require reconfiguration of shower head locations. Floor drain locations will need to be reconfigured if shower head locations move, a trench drain is recommended.

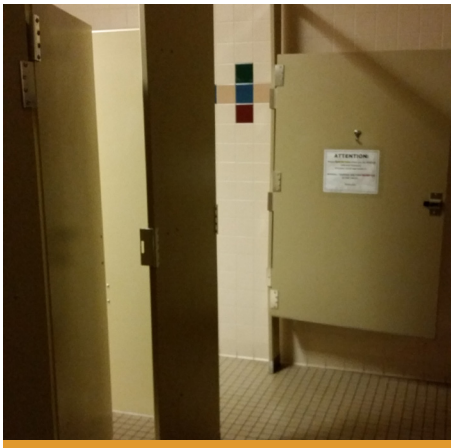


Figure 74 - Existing restroom configuration

PLUMBING CONDITIONS

The water service comes into the facility in the Boiler Room. The water meter and service is a 3" line (see Figure 76). The building has a water softener located in the Boiler Room. The water heater is also located in the Boiler Room and consists of an approximately 500 gallon storage tank, 100,000 BTU boiler with circulation pumps, and building recirculation pumps (see Figure 77).

The restroom group near the Wood and Metal Shop, Office, and on second floor have old plumbing and fixtures that appear to be in need of replacement (see Figure 78). There is a shower in the Locker Room, and a toilet adjacent to the First Grade Room that leaks (see Figure 79).

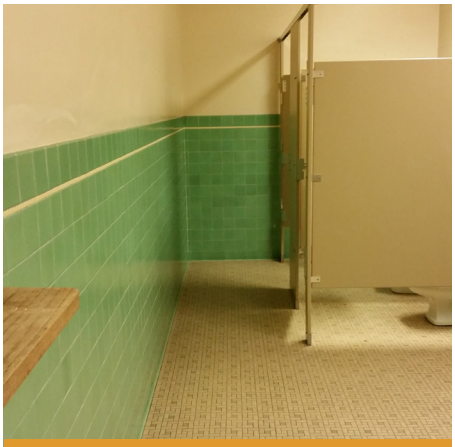


Figure 75 - Existing restroom configuration

Figure 76 - Domestic hot water boiler

Figure 77 - Domestic hot water storage tank

Figure 78 - Restrooms with outdated fixtures

Figure 79 - Leaking shower

MECHANICAL CONDITIONS

The building's heating is served by two, 5312 MGH steam boilers. There are a few smaller areas that use the steam heat but most of the steam is converted to hot water which is then pumped throughout the facility (see Figures 80 and 81). The boilers are dual fuel and typically fire with natural gas but when requested by the natural gas utility, they can be switched to operate with fuel oil (see Figure 82). There are portions of the school that are cooled. Those areas have direct expansion refrigerant systems (see Figures 83 and 84).

Figure 80 - Existing steam boiler

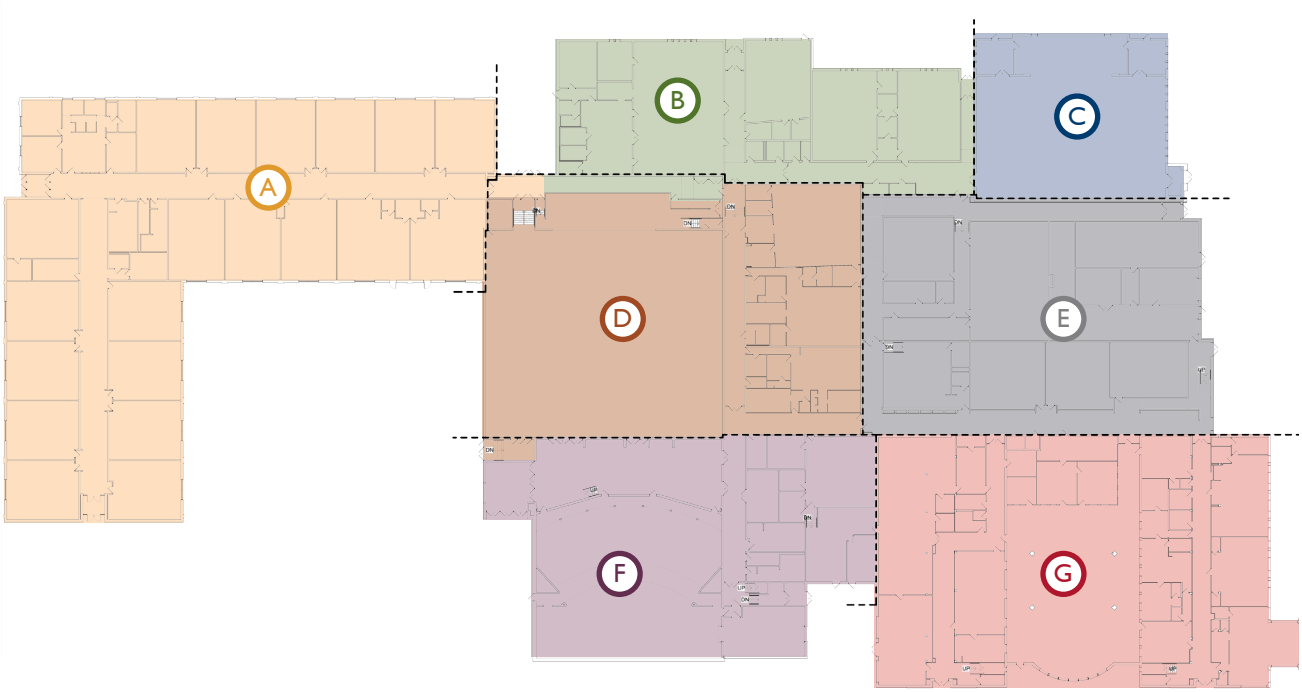
Figure 81- Heat exchanger

Figure 82 - Fuel oil tank

Figure 83 - Typical DX rooftop unit

Figure 84 - Elementary wing roof mounted equipment

MECHANICAL CONDITIONS AREA MAP



MAP LEGEND

- A Area A (Elementary School)
- B Area B (High School)
- C Area C (Elementary School Gymnasium)
- D Area D (High School Gymnasium)
- E Area E (Building + Grounds Maintenance)
- F Area F (Auditorium)
- G Area G (ECFE, Special Needs Rooms and Media Center)

Area A (Elementary School)

The Elementary School Office has a roof mounted air handler (see Figure 85). The Computer Lab has a roof mounted air handler. Classrooms have unit ventilators located along the outside wall of each room. One classroom was converted to a computer room in which two mini splits were added for cooling. On the day of the walk through the classroom had extreme high level of humidity that caused the floor to have condensation. A dehumidification system would address humidity for this entire wing.

Area B (High School)

The Biology and Chemistry areas are served by wall mounted unit ventilators for heat and ventilation and fin-tube radiation along the west walls. The Lunch Room and Choir Room are served by a roof mounted air handler and fin-tube radiation along the west walls. This unit is loud and appears to be old and due for replacement. No date or name plate could be found on the unit.

Area C (Elementary School Gymnasium)

The Elementary Gym is served by two air handlers located in the northwest and southwest corners of the area above the storage and electrical rooms (see Figure 86).

Area D (High School Gymnasium)

The Main Gym is served by two air handlers (see Figure 87) located in the northwest and southwest corners of the area above the storage and electrical rooms along with fin tube radiation along the north and south walls of the space. While on site there was a large pressurization difference between the gym and the auditorium corridor.

Area E (Building + Grounds Maintenance)

This area is served by roof mounted air handlers and indoor air handlers. The Grounds and Maintenance Room does not have an exhaust system. The exhaust is needed due to storage of gas power equipment and repairs being performed in the space. Since the facility still has areas where steam is being used, the boiler is steam type with a steam to hot water converter that supplies the majority of the facility. The boilers are fueled by both natural gas and fuel oil. The building hot water heater system consists of many pumps located in the building and at the air handler's rooms which creates

Figure 85 - Rooftop unit

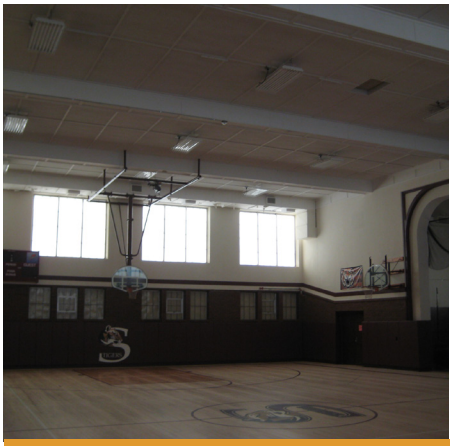


Figure 86 - Gymnasium ductwork

Figure 87 - Gymnasium air handling equipment

Figure 88 - Heating pumps

Figure 89 - Pump parts during repair

extra maintenance compared to a single pumping with Variable Frequency Drive (VFD) control (see Figures 88 and 89).

The condensate tanks were reported to leak and cause water and humidity with in the building which increases humidity levels and causes odors. The tunnel has an exhaust fan but it does not seem to carry the odor out. The exhaust fan does not solve the cause of the excess humidity. Elimination of the source of excess humidity should be considered by the District. Addressing the source of the humidity issues could be resolved if the moisture is coming from the leaking condensate tank or ground water filter through the tunnels walls. This moisture can evolve into much worse problems related to indoor air quality. Typically exhausting the tunnel is a good way to remove odor and keep the space negatively pressured so that the odor cannot migrate to occupied areas.

Area F (Auditorium)

This area is served by indoor air handlers. The dimming rack located in the auditorium catwalk area overheats and should be placed in a separate room with better climate control (see Figure 90). A mini split system or exhaust system should then be added for climate control.

Figure 90 - Auditorium air handler

Area G (ECFE, Special Needs Rooms, and Media Center)

This area is served by indoor air handlers except for the special needs and ECFE rooms. They have fin tube radiation only (see Figure 91). These two rooms do not have any ventilation.

Figure 91 - ECFE Room - radiation heat only

Information Technology (IT) Area

The IT Room near the Media Room has a large heat gain from equipment located in it which will need a mini split system to provide cooling. (see Figures 92 and 93). The IT Area over heats due to added equipment and no year-round cooling available. If the door is not propped open, overheating can damage equipment.

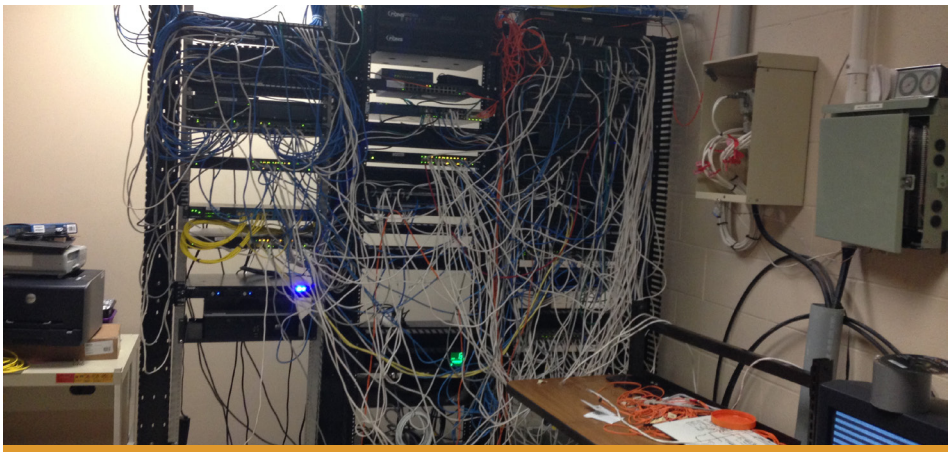


Figure 92 - Existing server rack

Figure 93 - Portable cooling unit

Mechanical Overview

Based on the age of the boiler system and the use of fin tube radiation systems within the facility, along with the maintenance related costs and lack of parts available for replacement, the District would benefit from an increase in energy efficiency, reduced maintenance costs, and more consistent temperature control with a complete replacement of the boiler system. The boiler for the domestic hot water system is of standard efficiency at 80% to 83% and non-condensing type. A new boiler water heater would have efficiency up 96%.

The boilers for the building heating system are steam boilers with a standard efficiency of 77% to 80%. A new boiler plant could gain efficiency up to 96%. The boiler can be converted to hot water type boilers to gain efficiencies to 82% for at least the use as a backup boiler but it will depend on the condition of the boiler tubes and other conditions. When the boilers are replaced or converted there are existing steam components throughout the facility that will need replacement to a hot water system.

While the building's heating, ventilation and air conditioning (HVAC) system has the potential to be able to meet the ASHRAE 62 requirements, it currently does not have the equipment necessary to verify. A test and balance of the building would need to be performed to verify that the proper outside air is coming into the facility. Much of the HVAC unit ventilator, roof top units, and air handlers have the potential to deliver the proper air, however the current system does not have any outside air flow measuring stations at the equipment's intake or CO2 monitors in the occupied spaces of the building. These monitoring systems would provide the information needed to determine if the ASHRAE 62 verification standards are met. Based on known and estimated dates of installation of mechanical equipment, the District should plan for replacement based on estimated life expectancy for each unit.

Unit Ventilators

Unit ventilators are mainly located in the Elementary Wing (Area A - 1991) and a few others scattered around the facility have a life expectancy of 30 to 35 years. Age related issues for these units relate to the fans and outside air dampers that can become unreliable. These units also do not have an opportunity to add energy recovery.

Roof Top Units

Roof top units (RTU) located in many areas of the building have a life expectancy of 15-20 years. The refrigerant system of the RTU requires the most maintenance and repairs due to the mechanic involved along with the dampers. The units also do not have an opportunity to add energy recovery unless they are replaced.

Indoor Air Handling Units

Indoor air handling units are located in many areas of the building and have a life expectancy of 25-30 years. Those with remote condensing refrigerant units typically require maintenance and repairs due to the mechanic involved along with the dampers. The units have an opportunity to add energy recovery by re-ducting the return air system and adding a roof mounted energy recovery unit.

Cooling

The existing equipment with cooling components have a Seasonal Energy Efficiency Rating (SEER) of 8 to 10. New equipment would provide a more energy efficient SEER score of 13 or more, with an anticipated savings of 30% of the energy used for cooling/ dehumidifying the facility.

Boiler Replacement Considerations

There are several considerations that should be made regarding boiler replacement. Additional investigation would be required to verify the remaining portions of the building that still use steam heat which is estimated at 15% of the building. Those areas would not heat properly if the building boilers were changed to hot water systems and would therefore require new equipment.

Newer boilers require less repairs and maintenance, reducing those costs in addition to reducing fuel costs. The size of boiler system would need to be evaluated to address any changes in the building occupancy or size of the building. The building does not have a variable frequency drive (VFD) which would provide additional control over the system for efficiency.

Energy Star Rebates are available for purchasing Energy Star rated lighting, appliances, and heating and cooling products.

ELECTRICAL CONDITIONS

Overview

Due to the various systems in use, applicable District staff would benefit from conducting a user educational program and checklist. The addition of photo sensors will allow timed lights to be turned on in instances when skies are darkened by cloud cover from storm events.

Existing Systems

The building is served from a 500 kVA ground-mounted transformer on the west side of the building. The main electrical service is just west of the small gym and terminates into a main fusible disconnect rated at 2,500 amps, with a voltage of 208, three-phase (see Figure 94). The main electrical equipment was replaced in the 1993 addition and appears to be in good condition. The electrical service size is appropriate for the size of the facility. The main service equipment contains an 800-amp breaker that serves the original main service equipment. This equipment is showing signs of age and at one point had water leaking onto the equipment. It appears this has been corrected but the stains from the water still appear on the equipment (see Figure 95). The original equipment consists of fusible switches. If they are not switched on or off once a year, the mechanisms to turn them off tend to lock up and do not function. This does not prevent the fuses from protecting the circuit, and it is not a hazard until a switch is needed to be switched off to perform service.

There are several locations throughout the facility that have branch panels that serve lighting and receptacle circuits. Most panels are in good condition. There are areas, such as the Boy's Locker Room, where a panel is located that is more likely to be damaged by students. In upper area B (High School) there are original Federal Pacific (FPE) panels. These panels are original to the building, are outdated and no longer manufactured, therefore finding replacement parts and breakers is difficult. If circuits need to be modified in the area, it is recommended that the panels be replaced.

The electrical service size is adequate for the size of facility. Should areas require more mechanical cooling or increased ventilation, a detailed analysis would need to be performed to confirm the existing service has the capacity for the equipment.

Exterior Lighting

While exterior the east side wall lighting packs appear to use LED's, the fixtures weren't illuminated during the site visit, yet they appeared to be in good working condition. The West side uses metal halide which could be replaced to receive energy savings.

Fire Alarm System

The facility has a fire alarm system with the main panel located in upper area B (High School), and an annunciator is located near the east main entrance to direct the fire department to the alarm location. The fire alarm appears to have been replaced in 1993. The fire alarm panel is a Simplex 4020 and is in fair condition. Fire alarm detection devices (heat and smoke detectors) and notifications devices (horn strobes) are located throughout the facility in locations expected. Smoke and heat detectors are located in mechanical and storage rooms, and horn strobes are located in corridors and large assembly spaces. The current fire alarm panel has been replaced with new models and any significant failure would result in replacement of the panel. Concurrent with the State Fire Marshal's recommendation, the entire system is due for replacement. Additional information about fire suppression system is the Life Safety Section of this report.

Figure 94 - Lighting control panel

Figure 95 - Original electrical service with water stained cabinet

Figure 96 - Main electrical service

Interior Lighting

The interior lighting consists mainly of linear fluorescent T8 light fixtures. Generally, the light fixtures are in good to fair condition. Light levels are appropriate in corridors, gymnasiums, and classrooms. Linear fluorescent T8 light bulbs are efficient and still widely used and available. Common areas including main corridors, entries, and exterior lighting are controlled by a lighting control panel to automatically turn lights on/off. The lighting controls system could be expanded to include classrooms for additional energy savings. The lighting controls have exceeded their estimated useful lifespan but appear to still be functioning properly (see Figure 96 on previous page).

If significant modifications are made, current energy codes require lights to automatically turn off when a space is not being occupied. Also, certain areas would require lights to automatically dim based on the natural sunlight coming into the space. These requirements reduce energy consumption and operating costs when the space is not being used. The Media Center currently has metal halide light fixtures. LED light fixtures could be installed resulting in significant energy savings.

The Music Room and Locker Rooms do not have illuminated exit signs. Powered signs should be installed for safety. Main egress lighting is powered from a generator providing the proper lighting to exit the building.

SECURITY CONSIDERATIONS

The two primary entries adjacent to the administration areas of the building do not currently have secure vestibules that require visitors to be checked in before continuing on throughout the building. At the elementary wing, relocating a pair of doors and upgrading the hardware of the office door could provide such security. The northeastern entrance at the District offices would require a new secure vestibule addition due to the close proximity of open stairs to the entry.

All exterior doors should be outfitted with door position switches tied into a monitoring system. The School should be aware if doors are being opened and/or propped open. Additional surveillance cameras should be added inside and outside the building.

TECHNOLOGY CONSIDERATIONS

An analysis was performed to evaluate the existing conditions related to the Technology system. Potential risks to the security and overall functionality of the current systems have been outlined along with an assessment of the risk levels associated with each.

Backup Procedures

POTENTIAL RISK: HIGH

Verify backups are being done on all servers and at least one copy is being stored off site. Without off-site storage of backup data the District is at risk of losing all email, documents, etc., in the event of a disaster.

Firewall

POTENTIAL RISK: HIGH

Verify a physical firewall is in place with an up-to-date maintenance subscription. A firewall is the main device that protects the District internal network from outside Internet threats.

Existing Conditions + Considerations

Windows XP Use

POTENTIAL RISK: HIGH

Support for Windows XP ended on April 8, 2014. Microsoft will no longer provide security updates or any technical support for this operating system. The District should consider upgrading to Windows 7 or 10.

Server 2003

POTENTIAL RISK: HIGH

Support for Windows Server 2003 ended on July 14, 2015. Microsoft will no longer provide security updates or any technical support for this operating system. The District should consider upgrading to Server 2008 or 2012 R2.

Exchange 2003 R2

POTENTIAL RISK: HIGH

Support for Microsoft Exchange 2003 ended April 8, 2014. Microsoft will no longer provide security updates or any technical support for this product. By not upgrading, the District are at risk of not being able to move mailboxes to future releases. Currently, Exchange 2003 is far enough behind that there is no easy native solution to migrate to Exchange 2013 or 2016. The District will have to use a third party migration tool. The District should consider upgrading to Exchange Server 2016 on premise or through Office 365. Other options would include Google Apps for Work, Zimbra, or Groupwise.

Network Documentation

POTENTIAL RISK: MEDIUM

Verify a network documentation system is being kept safe and software inventory is available. Without any network documentation, the School could be at risk, especially if the only staff with that information became unavailable. If a Software Inventory is not available, the District could be at risk if Microsoft asked for verification of that information. If the information cannot be verified, Microsoft will do an audit and fines are possible.

Microsoft Security Essentials as Anti-Virus

POTENTIAL RISK: MEDIUM

Purchase Microsoft System Center 2012 Endpoint, Kaspersky, AVG, Vipre, or a similar security software. Under Microsoft's License Policy, Security Essentials can only be used for home installs or small businesses with up to 10 PCs. Currently, the District would be in violation of that policy.

All Physical Servers

POTENTIAL RISK: LOW

The District could also consider implementing a virtual environment using VMware ESXi, Microsoft Hyper-v, or XenServer. This could lower physical server count to one machine, allowing all servers to be virtualized on that box. This would save on power consumption, cooling needs, and provide an environment with many more options regarding software changes and disaster recovery strategies.

Network Wiring

POTENTIAL RISK: LOW

Rewiring the Server Room and both wiring closets with correct cable lengths would benefit the District. Cables can be neatly tied together with Velcro when done correctly to alleviate confusion associated with disorganized cabling, which can make it very difficult to trace a cable in the event of an issue or pulling a switch out of the rack to replace it.

PROGRAMMATIC CONSIDERATIONS

As noted in the introduction of this report, Springfield School has 650 students enrolled in preschool through twelfth grade. The facility has an Elementary wing complete with administration offices and shares a Cafeteria, Physical Education, Auditorium, and other support spaces with the Junior and Senior High population.

The majority of core classroom spaces meet or exceed the Minnesota Department of Education's guidelines for quantity and square footage.

While portions may require renovation to accommodate future needs as they arise, overall administration areas appear to contain adequate space to meet the demands of operations.

Facility is in use up to 7 days per week, from early morning until 9 p.m. most week days.

Unfortunately, some of the support spaces and elective educational spaces within the facility do not support the same potential. The Art Room is currently serving both two-dimensional and three-dimensional art classes. Undersized, it is also encumbered with limited support spaces. Ideally, there would be separate spaces for each discipline. The Fitness/Weight Room is too small to adequately serve as a teaching station for Physical Education. Storage and locker rooms are sufficiently sized.

The Industrial Technology/Agriculture/Automotive Shop is also undersized and encumbered with limited support spaces. When work is required on vehicles, it must be completed outdoors.

While there is adequate Gymnasium space for the current student population for educational purposes, increases in extracurricular activities and community education programs are surpassing the capacity of the current facilities. For example, space used for varsity sports practices held after school hours, requires community education programs to be held later in the evening for younger students. This late activity schedule may not be ideal timing for the younger students who benefit from more hours of sleep. Therefore, the extra-curricular activities and community use of Springfield Public Schools exceeds capacity available. Expanding community offerings beyond student use is limited with current space availability.

Presently, there are no designated flexible learning areas to specifically enable small group work or break out opportunities. Portions of the building, such as the para-professional planning area and select computer labs, could potentially be used for this function. To lighten the burden of three lunch periods, the student commons require approximately a third more square footage to comfortably handle the current student population. If enrollment were to increase, the majority of core academic spaces would accommodate the required increase.

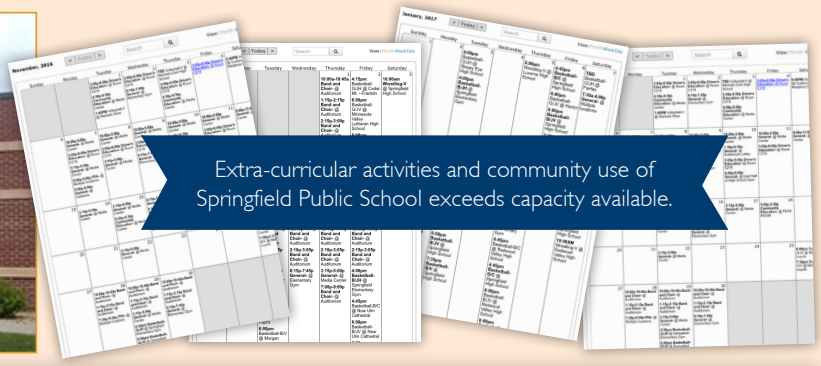
The District also expressed the need for teacher resource areas throughout the building. It would be beneficial for staff within the same department to have a space for collaboration and curriculum planning. In planning for the future, the District may also select to renovate some areas of the facility to accommodate more ECFE programming.

A Space Needs Assessment was conducted and a summary of the results is contained in the Appendix. Currently, costs for programmatic considerations are not included in this report. ISG and the District will need to further define the parameters of these items to generate a cost.

OPPORTUNITIES

- ☑ Separate spaces for two- and three- dimensional art classes
- ☑ Increase size of Fitness Center
- ☑ Review space for extra-curricular and community use
- ☑ Add teacher collaboration spaces
- ☑ Add flexible learning areas for para planning and slect comp lab areas
- ☑ Increase student Commons by third
- ☑ Relocate select areas for ECFE programming

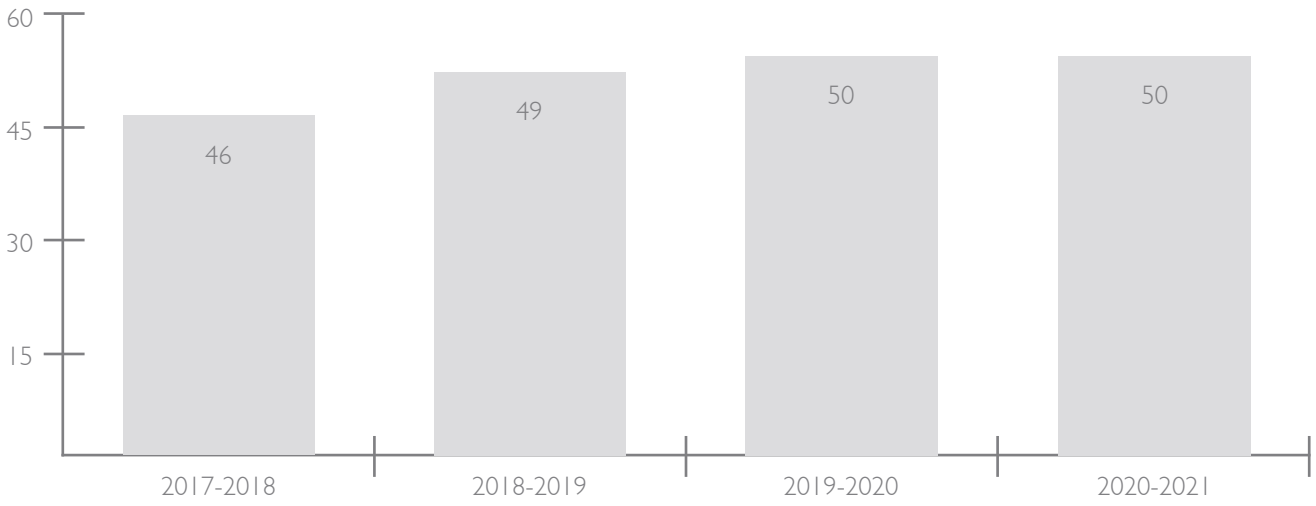
SNAPSHOT OF EVENTS + ACTIVITIES AT SPRINGFIELD PUBLIC SCHOOL



Extra-curricular activities and community use of Springfield Public School exceeds capacity available.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
OPEN GYM SPRING MUSICAL	SCHOOL 8:00 a.m. - 3:00 p.m. SPORTS PRACTICE 3:15 p.m. - 5:30 p.m. LEGO LEAGUE 5:30 p.m. - 7:30 p.m. VARSITY GAME 7:30 p.m. - 9:30 p.m.	SCHOOL 8:00 a.m. - 3:00 p.m. SPORTS PRACTICE 3:15 p.m. - 5:30 p.m. COOKING CLASS 5:30 p.m. - 7:30 p.m. VARSITY GAME 7:30 p.m. - 9:30 p.m.	SCHOOL 8:00 a.m. - 3:00 p.m. SPORTS PRACTICE 3:15 p.m. - 5:30 p.m. LEGO LEAGUE 5:30 p.m. - 7:30 p.m. FFA MEETING 7:30 p.m. - 9:30 p.m.	SCHOOL 8:00 a.m. - 3:00 p.m. SPORTS PRACTICE 3:15 p.m. - 5:30 p.m. COOKING CLASS 5:30 p.m. - 7:30 p.m. VARSITY GAME 7:30 p.m. - 9:30 p.m.	SCHOOL 8:00 a.m. - 3:00 p.m. SPORTS PRACTICE 3:15 p.m. - 5:30 p.m. FUNDRAISER 5:30 p.m. - 7:30 p.m. VARSITY GAME 7:30 p.m. - 9:30 p.m.	SPORTS PRACTICE 8:00 a.m. - 12:00 p.m. CLUB MEETING 1:00 p.m. - 3:00 p.m. JV GAME 4:00 p.m. - 7:30 p.m. VARSITY GAME 7:30 p.m. - 9:30 p.m.

DISTRICT KINDERGARTEN ENROLLMENT PROJECTIONS



PRIORITY SUMMARY

Based on the items evaluated in the previous section, any issues or deficiencies documented have been assigned a level of priority and an estimate for costs.

The issues with the highest priority items, include life safety deficiencies, while less urgent issues including necessary maintenance, replacement, and aesthetic improvements are defined with lower priority levels. While lower priority items still warrant attention, they are not critical to safety, security, or health concerns *(please note that currents costs shown are estimated construction costs only. For total project costs, 20% - 25% should be added to the construction costs of the following items)*:

- Project administration
- Permitting
- Owner fixtures and finishes
- Design fees

The following summary outlines the priority levels identified within this report, as well as the recommended time frame to address any issues.

PRIORITY	ISSUE	DESCRIPTION
Priority 1 2018-2020	Life Safety	As typically noted by Fire Marshall/ Life Safety Officials.
	Deterioration	Further deterioration will create higher future repair costs or may cause damage to other areas of the structure.
	Health	Areas that do not meet the state health code requirements. Mechanical systems that do not currently comply with ASHRAE Standards are given a high priority. However, these upgrades are not mandated and would not be required unless other substantial work is being done to the facility and systems in question.
	Accessibility	Items that must be completed to allow access to the building or primary function areas within the building.
	Hazardous Material	Items that pose a significant impact to building occupants.
Priority 2 2021-2023	Energy	Item results in payback within 10 years or less.
	Deterioration	Material or system that currently functions but will require replacement or major maintenance within five years.
	Accessibility	Modifications required to meet state guidelines.
	Hazardous Materials	Removal of items affected by other changes occurring in Priority 2.
	Health	Inadequate exhaust and ventilation near lab equipment or other areas lacking adequate ventilation.
Priority 3 2024-2028	Energy	Item results in payback in more than 10 years.
	Health	Items that do not meet state health code requirements.
	Deterioration	Material or system currently functions but will require replacement or major maintenance in 6-10 years.
	Hazardous Materials	Removal of item affected by other changes occurring in Priority 3.
Priority 4 2029	Aesthetics	Item which impacts the visual environment.
	Hazardous Material	Removal of items affected by other changes occurring in Priority 4.
	Accessibility	Items which do not meet full requirements of federal accessibility guidelines.

Priorities + Estimated Costs

COST OF PRIORITIES

PRIORITY	DESCRIPTION	ESTIMATED COST
Priority 1 2018-2020	Add fire suppression system to High School, Junior High School, and District Office areas to meet fire code requirements	$400,000.00
	Install a guardrail at Choir Room risers	$3,000.00
	Install ADA handrails at both sides of NE main ramp entrance	$3,500.00
	Replace miscellaneous door knobs with ADA lever style hardware (allowance)	$2,500.00
	Replace existing portions of EDPM roofing 0-2 years (46,785 SF)	$560,000.00
	Replace fire alarm system throughout entire facility - previous replacement occurred in 1993	$30,000.00
	Replace bent metal sweep at north door	$500.00
	Add illuminated exits signs to Music Room and Locker Rooms	$3,000.00
	Install shelving in Facility Maintenance Area	$2,000.00
	Replace shrinking or damaged caulk joints at exterior of building	$2,500.00
	Create secure entrance vestibule at NE entrance near the District Office	$75,000.00
	Upgrade hardware and create Secure Entrance Vestibule at Elementary Entrance	$25,000.00
	Upgrade to Windows Server 2008 or 2012 R2	$30,000.00
	Migrate email to Exchange 2013 or 2016 (third party migration tool with be necessary)	$15,000.00
	Install dehumidification to serve Area A - Elementary Wing	$350,000.00
	Add exhaust to landscaping Storage Room	$9,000.00
	Replace rooftop air handler serving Choir Room and Lunch Room	$150,000.00
	Add ventilation to Special Needs and ECFE Rooms	$85,000.00
	Upgrade to Windows 7 or Windows 10	$15,000.00
	TOTAL	$1,761,000.00

Priorities + Estimated Costs

PRIORITY	DESCRIPTION	ESTIMATED COST
Priority 2 2021-2023	Replace painted metal kitchen cabinet with stainless steel cabinet	$3,000.00
	Modify Boy's & Girl's locker rooms showers and restrooms to comply with ADA	$200,000.00
	Update existing building restrooms to comply with ADA requirements	$700,000.00
	Replacement of ceiling grid in Kitchen with new washable ceiling tile per MDH code	$11,000.00
	Replace existing portions of EPDM roofing 5-10 years (11,930 SF)	$150,000.00
	Replace damaged and stained ceiling tiles throughout building	$1,000.00
	Add handrail at SE stair on inside of stair adjacent Auditorium	$2,500.00
	Installation of new mulch in Playground Area	$15,000.00
	Develop network documentation and software inventory	$4,500.00
	Install anti-virus software appropriate for business/education use	$4,500.00
	Relocated dimming rack in Auditorium to separate room with better climate control to avoid overheading, Install mini-split system or exhaust system for climate control in this area	$30,000.00
	Add mini-split to IT near the Media Room to provide adequate cooling for equipment	$12,000.00
	Update hydronic heating pumps to a variable speed/flow (VFD) secondary system with two pumps instead of multiples located throughout the facility	$100,000.00
	Replace panels in upper Area B	$10,000.00
	Replace metal halide light fixtures with LED fixtures in Library	$7,000.00
	Minor Tuckpointing of exterior brick (allowance)	$15,000.00
	Replacement of asphalt around existing Playground Area	$35,000.00
	Removal and replacement of concrete slab at theatre Loading Dock Areas	$25,000.00
	Repave and stripe six stall parking lot on west side of building	$10,000.00
	Install stainless steel casework and equipment in Concessions per MDH code	$10,000.00
	Asbestos tile removal if impacted by other work	TBD
	Carpet replacement at select rooms in facility needing replacement	$50,000.00
	Brick replacement and cleaning of Bell Memorial	$4,000.00
	TOTAL	$1,399,500.00

Priorities + Estimated Costs

PRIORITY	DESCRIPTION	ESTIMATED COST
Priority 3 2024-2028	Upgrade remaining water fountains (bottle filler type)	$6,000.00
	Replace Kalwall windows located in Elementary Gym with energy efficient windows	$100,000.00
	Miscellaneous repair of spalling concrete throughout site	$5,000.00
	Bike rack replacement	$900.00
	Replace door W8 at west side of building	$8,000.00
	Provide flammable liquid storage cabinet in Yard Storage Room.	$1,600.00
	Upgrade sound absorbing panels in Choir Room	$6,000.00
	Patch and resurface wall on north stairwell	$1,000.00
	Replace stage curtain in main Gymnasium	$10,440
	Replace carpet runners in Auditorium	$15,000.00
	Clean exterior signage	$500.00
	Paint all exterior doors	$5,000.00
	Address pressurization difference between Gym and Auditorium corridor	$7,000.00
	Install new high efficiency boiler plant	$350,000.00
	Replace main electrical service breaker	$75,000.00
	Update outdated lighting controls	$150,000.00
	Relocate select branch panels	$25,000.00
	Stone cleaning around the building - pressure wash	$2,000.00
	TOTAL	$768,440.00
Priority 4 2029	General landscaping improvements (allowance)	$5,000.00
	Upgrade of built-in cabinetry in classrooms second floor	$30,000.00
	Replace lockers in High School	$106,000
	Renovate areas to incorporate more ECFE programming	TBD
	Expand Student Commons Area	TBD
	Upgrade and expand existing Fitness/Weight Room	TBD
	Upgrade and expand support spaces and educational elective spaces such as the Art Room	TBD
	Incorporate flexible learning areas to better facilitate small group work and breakout spaces	TBD
	Install backup procedures with offsite storage	$25,000.00
	Install up-to-date firewall	$4,500.00
	Implement virtual environment	$12,000.00
	Rewire network in server room and both wiring closets	$5,000.00
	Replace plumbing and fixtures on second floor	$16,000.00
	Replace plumbing and fixtures within restroom group near the Office	$32,000.00
	Replace plumbing and fixtures within restroom group near the Wood and Metal Shop	$12,000.00
	TOTAL	$247,500.00

Appendix

Space Needs Assessment Summary

Space Needs Assessment Summary

A space needs assessment was conducted to consider square footage with programming needs, current uses, future needs, and capacities. This summary spreadsheet shows results of the findings that were incorporated into considerations and recommendations throughout the Facility Assessment Report.

SPACE PROGRAM Assessment — ISG

SPRINGFIELD PUBLIC SCHOOLS - ISD #85 — Project #18829 — September 2016

Grade Configuration:	K-12
Student Capacity:	600
Staff	

		Existing						Low Range				High Range		
Description	Notes	Room #	Qty	Net SF	Subtotal	Stud. Load/CR	Total Stud. Load	Qty		Net SF	Subtotal		Net SF	Subtotal
School Learning Spaces														
Classrooms														
Early Childhood	Restrooms 64 sq.ft., and Stor. 93 sq.ft. i	C172, C177	2	1,988	1,988	15	30	2	15	1,000	2,000	25	1,400	2,800
Kindergarten	Restrooms and storage sq.ft. included	A101, A102, A106	3	3,459	3,459	14	43	3	15	1,200	3,600	25	1,500	4,500
1st Grade		A108, A109	2	1,897	1,897	17	33	2	15	850	1,700	25	950	1,900
2nd Grade		A119,A118	2	1,792	1,792	16	32	2	15	850	1,700	25	950	1,900
3rd Grade		A120, A121	2	1,792	1,792	16	32	2	15	850	1,700	25	950	1,900
4th Grade		A135, A136	2	1,792	1,792	16	32	2	15	850	1,700	25	950	1,900
5th Grade		A138, A141	2	1,795	1,795	16	32	2	15	850	1,700	25	950	1,900
6th Grade		A142, A143	2	1,792	1,792	16	32	2	15	850	1,700	25	950	1,900
World Studies		A116	1	898	898	16	16		15	850				
High School Classrooms	math, social studies, english, spanish	C123, C124, C125, B208, B206, B217, B218, C212, C213, C235, C236	11	10,819	10,819	17	191	11	15	850	9,350		950	10,450
	health	B216	1	1,001	1,001	20	20							
Subtotal (Classrooms)					**29,025**		**492**				**25,150**			**29,150**
Common Spaces														
Large Group/Multipurpose Rm	15 SF per student	A167	1	1,995	1,995	133	133	1		15	15		15	15
Small Group / Conf / Office		A134,C148,C182	3	508	508			1		150	150		200	200
Subtotal (Common Spaces)					**2,503**		**133**				**165**			**215**
Library / Media Center														
Seating / Stacks Comp / Ref	8-10% of students x 35 SF	C150	1	4,942	4,942	82	82	1		35	1,680		35	2,100
Multimedia Production		C149		172	172			1		300	300		400	400
Work Room / Storage		C151, C152, C153	3	918	918			3		400	1,200		600	1,800
Subtotal (Library / Media Center)					**6,032**		**82**				**3,380**			**4,500**
Technology														
Computer Lab		A132, A303, A311	3	3,022	3,022	15	45	3	15	1,000	3,000	20	1,400	4,200
Control and Headrooms		A133	1	113	113			1		640	640		740	740
TV/Video Studio		C227	1	956	956	11	11	1	15	1,250	1,250	15	1,250	1,250
Subtotal (Technology)					**4,091**		**57**				**6,290**			**7,890**
Science														
Classroom / Lab		B121, B126	2	2,418	2,418	15	30	2	15	1,200	2,400	25	1,500	3,000
Storage / Lab Prep		B122,B123,B124,B125	4	356	356			1		350	350		350	350
Subtotal (Science)					**2,774**		**30**				**2,750**			**3,350**
Special Education														
Elem. Classroom		A135,C179	2	1,827	1,827	23	46	2	12	450	900	15	600	1,200
Elem. Classroom/Lab		A117	1	896	896	13	13	1	12	800	800	16	1,200	1,200
HS Classroom		C234	1	886	886	22	22	1	12	450	450	15	600	600
HS Classroom / Lab		C233	1	891	891	13	13	1	12	800	800	16	1,200	1,200
Subtotal (Special Education)					**4,500**		**95**				**2,950**			**4,200**
Technical Education														
Tech Lab	Wood Shop	A183	1	2,126	2,126	18	18	1	15	1,800	1,800	20	2,400	2,400
STEM	Ag	A186	1	890	890	7	7	1	15	2,000	2,000	20	3,000	3,000
CADD / Graphics		A340	1	1,073	1,073	11	11	1	15	1,400	1,400	20	2,000	2,000
Principals of Technology	Welding	A133	1	997	997	12	12	1	15	1,200	1,200	20	1,400	1,400
Storage / Support Space		A187,B180,B183,C140,C145	5	1,884	1,884			5		150	750		250	1,250
Subtotal (Technical Education)					**6,970**		**48**				**7,150**			**10,050**
Business / Marketing Education														
Classroom		A310	1	1,074	1,074	16	16	1	15	1,000	1,000	25	2,000	2,000
Subtotal (Business / Marketing Education)					**1,074**		**16**				**2,200**			**3,400**
Family and Consumer Science														
Classroom		C220	1	1,552	1,552	26	26	1	15	900	900	15	1,000	1,000
Subtotal (Family and Consumer Science)					**1,552**		**26**				**2,100**			**2,500**

Space Needs Assessment Summary

Art														
Multipurpose		B178	1	1,040	1,040	13	13	1	15	1,200	1,200	20	1,500	1,500
Kiln / Glazing / Clay		B176	1	116				1		400	400		600	600
Storage		B174	1	51	51			2		350	700		350	700
Dark Room		B177	1	168	168			1		400	400		800	800
Subtotal (Art)					**1,259**		**13**				**6,520**			**7,920**
Music														
Band		B140	1	1,512	1,512	15	15	1	20	2,000	2,000		3,000	3,000
Choral			1	1,102	1,102	15	15	1	20	1,500	1,500		2,200	2,200
General Music								1		1,000	1,000		1,200	1,200
Instrument Storage	4 SF per instrument							1		600	600		800	800
Uniform Storage	3 SF per uniform							1		300	300		400	400
Choral Robe Storage	2.5 SF per robe							1		150	150		250	250
Practice		2 off choral, B137, B13	4	326	326			4		60	240		80	320
Group Practice								2		100	200		150	300
Ensemble								1		350	350		450	450
Electronic Keyboarding Lab								1		750	750		750	750
Recording Control Room								1		100	100		150	150
Music Library								1		150	150		200	200
Office / Lesson Studio		choral, B139	2	223	223			2		100	200		200	400
Instrument Repair								1		75	75		75	75
Performance Equip Storage								1		200	200		300	300
Subtotal (Music)					**3,163**		**30**				**7,815**			**10,795**
Physical Education / Athletics														
Gymnasium		elem, and HS	2	16,453	16,453	14	27	1	20	12,000	12,000	25	14,000	14,000
Weights / Fitness			1	948	948	9	9	1	20	2,000	2,000	40	4,000	4,000
Phys Ed Locker Rooms	including shower and towel rooms		4	2,563	2,563			2		1,500	3,000		3,000	6,000
General Storage	Mens LR, Womens LR, Elem Gym, HS Gym		7	706	706			2		300	600		300	600
Laundry		C11	1	344	344			1		200	200		200	200
Athletic Offices	in locker rooms		2	240	240						0			0
Subtotal (Physical Education / Athletics)					**24,602**						**37,200**			**54,900**
					1									
Subtotal - School Learning Spaces (NSF)					**87,545**		**37**				**103,670**			**138,870**
Food Service														
Commons	15 SF per student, per session (4)		1	2535	2,535	169	676	150		14	2,100		16	2,400
Kitchen - Full Preparation			1	756	756			1		2,000	2,000		3,000	3,000
Storage			1	366	366			1		350	350		450	450
Cooler			1	77	77			1		300	300		400	400
Freezer			1	95	95			1		350	350		450	450
Dishwasher			1	132	132			1		400	400		600	600
Office			1	63	63			1		150	150		150	150
Table Storage			1	291	291			1		800	800		1,000	1,000
Subtotal (Food Service)					**4,315**						**9,650**			**12,800**
Auditorium			1	8420	8,420									

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