PREPARING STUDENTS FOR THE EMERGING WORLD

SASD

IN WHICH THEY WILL LIVE.

STOUGHTON
AREA SCHOOL DISTRICT

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STOUGHTON AREA SCHOOL DISTRICT

FACILITIES STUDY

OCTOBER 19, 2018

EUA PROJECT NO.: 317530-01

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EXECUTIVE SUMMARY

INTRODUCTION

A Facilities Assessment is an independent, objective analysis of building and site conditions and an evaluation of the capabilities of the facilities to meet educational and community goals. The Facilities Assessment is often a critical first step in the planning process, helping clients and their stakeholders better understand areas of need and deficiency. The document may be used to inform plans for ongoing maintenance, and as a foundation for future masterplanning or building projects.

The findings in a Facilities Assessment are based on industry standards and best practices related to architecture and engineering. Observations are made by qualified industry professionals in their respective fields, through visual assessment of existing conditions and analyses of available building plans, reports, and other data as applicable.

DISTRICT OVERVIEW

The Mission of the Stoughton Area School District, with students as our number one priority, is to ensure educational opportunities which challenge students to achieve excellence, maximize their unique talents and abilities, prepare them to face the demands of the future, and be literate, contributing members of society.

The Soughton Area School District serves approximately 2800 students in grades K-12 in five buildings. The district is comprised of:

- Fox Prairie Elementary School (K-5)
- Kegonsa Elementary School (K-5)
- Sandhill Elementary School (K-5)
- River Bluff Middle School (6-8)
- Stoughton Area High School (9-12)

The district houses a 4K program in five community partner sites. In addtion to the buildings used by the district for students, they also have several support buildings, including a bus garage, maintenance shop, administration building, community building and 1892 Historic Building. They also lease out the Yahara building to another educational entity.

The Stoughton Area School District's academic buildings vary widely in age of construction. Kegonsa Elementary, built in 1962 is the oldest, but had additions/renovations in 1982 and 1996. Sandhill Elementary and River Bluff Middle School were built with nearly identical floor plans in 1997 and are the district's newest academic buildings. Fox Prairie Elementary was built in 1990 with additions/renovations in 1992. The High School is the second oldest school, built in 1965, with multiple additions and renovations in 1974, 1987, 1997 and 2004.

Building uses have changed over the years, and some buildings now house students of different ages than they were originally designed to serve. Expectations for traffic flow, visitor entry protocols, and student safety have created significant challenges on some of the district's facilities. Educational practices have also changed substantially, so it is not suprising to find challenges related to building capacity, utilization, and educational adequacy.

The overall physical condition of the district's academic buildings, however, is generally good to fair. This is due in part to consistent maintenance practices, which have extended the service life of the buildings. SASD has several maintenance programs in place to address preventative maintenance throughout its buildings, such as annual ceiling tile replacement, painting, and door hardware replacement. However, as even the newest structures are now 20+ years old, it is reasonable to expect that more substantial maintenance may be required to maximize their useful lives.

ASSESSMENT PROCESS

In order to complete the Facilities Assessment, Eppstein Uhen Architects (EUA) assembled at team of professionals to evaluate building conditions. That team included staff members from EUA, Muermann Engineering and Fredericksen Engineering. Team site visits took place from March through June of 2018. The team met with administration and facilities staff to review priorities and concerns and gather general building information including building plans and other data/reports. The team also walked through each building to observe building conditions and provide a more complete analyses.

Observations and recommendations included in this report are based on a general visual assessment and on owner provided information. Conditions observed were generally not field measured, and may require further quantification and additional review if future action is to be taken. Observations do not extend to any concealed or below grade conditions, and do not include destructive testing or hazardous material assessments.

Although a full building code review is not included in this assessment, the findings may contain general observations regarding code compliance. Older buildings are "grandfathered" by the codes under which they were constructed and are typically not required to meet all current codes. However, code compliance issues may need to be addressed if building renovations or additions were to occur. The assessment may also include findings related to the Americans with Disabilities Act or ADA. Schools and other public entities are generally required to address ADA conformance issues to the maximum extent feasible, or to provide alternative accessibility measures.

CONDITION ASSESSMENT

The **Building Condition Assessment** includes a comprehensive review of the building's exterior shell (roof, wall systems, windows/doors, etc.); interior finishes and materials (flooring, casework, etc.); mechanical, electrical, and plumbing systems; and general compliance with the Americans with Disabilities Act (ADA.) Please refer to section 2 of this report for more in-depth analyses of each facility. An overview of findings is given in the following tables.

CONDITIONS SCORE		
NEW	5	NEW OR LIKE NEW CONDITION; NO ISSUES.
GOOD	4	GOOD CONDITION, FEW ISSUES
FAIR	3	AVERAGE WEAR FOR BUILDING AGE
POOR	2	WORN FROM USE, END OF EXPECTED LIFECYCLE
CRITICAL	1	EXTREMELY WORN OR DAMAGED

Category	1892 Historic Building	Administration Building	Bus Garage	Community Building	Fox Prairie Elementary	Kegonsa Elementary	Maintenance Shop	River Bluff Middle School	Sandhill Elementary	Senior High School	Yahara Elementary
ADA	2.5	2.8	2.5	2.0	3.8	3.4	2.8	3.7	3.5	3.8	3.8
Civil / Site	2.8	3.6	3.4	2.9	3.6	3.4	3.4	2.9	3.4	3.7	3.5
Electrical	1.0	3.7		2.5	3.7	3.8	3.4	4.0	4.0	3.5	3.1
Exterior Enclosure	2.2	3.4	2.5	2.2	3.0	3.3	2.2	2.7	2.7	3.1	2.0
Foundation	2.0	4.0	3.0	2.7	2.5	3.7	4.0	4.0	4.0	3.7	2.5
Interior	1.0	4.0	3.0	2.4	2.8	3.0	2.2	3.2	3.3	3.5	2.2
Mechanical	1.0	2.8		2.3	2.9	3.4	2.9	3.2	3.2	2.9	2.8
Miscellaneous	1.0	3.7	4.0	1.8	3.5	3.8	2.7	3.4	3.5	3.9	2.5
Plumbing	1.0	3.0		2.6	2.6	3.0	2.6	3.0	3.0	3.0	2.5
Roofing	3.0	3.7	3.0	2.3	4.0	4.0	3.7	4.3	4.3	3.8	2.0
Structural System	1.0	4.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0	3.0
Average Condition Score by Building	1.7	3.4	3.0	2.4	3.3	3.5	3.0	3.4	3.5	3.5	2.8

Average Definciency Score

Category	Topic	1892 Historic Building	Administration Building	Bus Garage	Community Building	Fox Prairie Elementary	Kegonsa Elementary	Maintenance Shop	River Bluff Middle School	Sandhill Elementary	Senior High School	Yahara Elementary
ADA	Accessible Entry(s)	1	4	4	2	4	4	4	3	3	4	4
	Accessible Parking	5	5	2	2	5	4	2	5	4	5	4
	Accessible Restrooms	1	2	1	2	4	2	1	4	4	4	2
	Accessible Route	2	1	3	1	3	3	4	4	4	3	4
	Exterior Stairs, Ramps & Rails	1	3		3	2			3	3	3	5
	Passenger Loading Zone	5	2		2	5	4		3	3	4	4
Civil / Site	Athletic Field Support Spaces					3	4			4	2	5
	Athletic Fields					3	2			4	4	4
	Gates & Fencing			2	2	5	3	5	4	4	4	5
	Irrigation System	3	3	2	3	2	2	3	2	2	4	3
	Landscaping	3	4	3	4	4	4	3	3	5	4	3
	Maintenance (Dock, Trash, Util.)	2	4	5	4	4	3	3	2	3	4	1
	Pedestrian Access	3	4	4	3	4	5	5	4	4	4	4
	Playground Equipment					4	3		2	2		5
	Sidewalks & Pavement	3	2	4	2	3	3	2	2	2	3	2
	Site Amenities (Furniture, etc.)		4	4	2	5	4	3	3	3	3	3
	Site Signage		4		3	3	4		4	4	5	4

Category	Topic	1892 Historic Building	Administration Building	Community Building	Fox Prairie Elementary	Kegonsa Elementary	Maintenance Shop	River Bluff Middle School	Sandhill Elementary	Senior High School	Yahara Elementary
Mechanical	Air Handlers		2	1	3	5	3	3	3	4	3
	Air Handlers 2					2					
	Air Terminals (VAV, FPVAV)		3			5		3	3	3	3
	Boilers			3		3		3	3	3	3
	Boilers 2									3	
	Chillers & Cooling		2		3	4	3	2	2	4	3
	Chillers & Cooling 2					2					
	Controls		2	2	3	4	3	4	4		3
	Ducts & Distribution		3	2	3	3	3	4	4	3	3
	Dust Collection				2		2			3	
	Exhaust Fans		3	2	3	4	3	3	3	3	3
	Fan Coils, Unit Ventilators			2		3					1
	General Ventilation Comments	1									
	Piping/Insulation		4	4		3		4	4	3	3
	Pumps		3	3		3		3	3	3	3
	Unit Heaters		3	2	3		3	3	3	3	
	Wall Fin Radiation			2		3		3	3		

Average Definciency Score		1892 Historic Building	Administration Building	Bus Garage	Community Building	Fox Prairie Elementary	Kegonsa Elementary	Maintenance Shop	River Bluff Middle School	Sandhill Elementary	Senior High School	Yahara Elementary
Foundation	Dampproofing & Waterproofing		4		2		4		4	4	4	
	Foundation & Frost Walls	2	4	2	3	2	4	4	4	4	4	3
	Slab on Grade		4	4	3	3	3	4	4	4	3	2
Interior	Casework & Millwork	1	5	4	3	2	2	2	3	3	2	2
	Ceiling Finish	1	4	2	2	2	3	3	2	2	3	2
	Ceiling Other					2					2	2
	Coiling Shutters & Grilles					4	4		4	4	4	2
	Fire Doors & Shutters										5	
	Floor Finish	1	4	4	1	2	2	2	4	4	4	2
	Flooring Other			2							5	2
	Flooring Other 2										1	
	Gym/Sports Flooring				3	4			3	3	4	2
	Interior Doors, Frames & Hardware	1	3	2	2	2	3	2	3	3	3	2
	Stairs & Handrails	1	4		3	4			3	3	4	
	Wall Finish Condition	1	4	4	2	3	3	2	4	4	4	3
	Window Treatments	1	4	3	3	3	4		3	4	4	3

Category	Topic	1892 Historic Building	Administration Building	Bus Garage	Community Building	Fox Prairie Elementary	Kegonsa Elementary	Maintenance Shop	River Bluff Middle School	Sandhill Elementary	Senior High School	Yahara Elementary
Electrical	Arc Flash Study		1		1	1	1	1	1	1	1	1
	CCTV		3		3	5	5	5	5	5	5	5
	Communications Systems	1	5		1	3	3	5	5	5	5	1
	Data	1	5		5	5	5	5	5	5	5	2
	Distribution Panelboards	1	3		1	4	5	1	5	5	1	3
	Fire Alarm System	1	2		1	1	2	5	2	2	3	2
	Generator System		3		3	3	3	5	3	3	3	3
	Intrusion Alarm		2		2	2	2	1	2	2	2	2
	Keyless Entry		5		5	5	5	5	5	5	5	5
	Lighting	1	5		1	4	3	1	3	3	3	3
	Lighting Control	1	5		1	5	5	1	5	5	5	5
	Low Voltage Switchgear & Distribution	1	1		1	4	5	1	5	5	1	5
	Power Devices	1	5		3	3	3	5	4	4	3	3
	Site lighting	1	5		5	5	5	5	5	5	5	1
	Site utilities (transformers, etc.)		5		5	5	5	5	5	5	5	5
Exterior Enclosure	Expansion Joints										3	
	Exterior Cladding	3	4	3	2	3	4	2	3	3	4	2
	Exterior Doors	1	3	3	4	2	3	2	3	3	3	1
	Exterior Sealants	4	3	2	1	4	3	3	2	2	3	2
	Louvers & Vents	2	4	3	2	3	4	2	3	3	3	3
	Windows, Storefronts & Curtainwalls	2	3	2	2	3	4	2	4	4	4	3
	Wood Windows	1		2			2		1	1	2	1

Average Definciency Score

Category	Topic	1892 Historic Building	Administration Building	Bus Garage	Community Building	Fox Prairie Elementary	Kegonsa Elementary	Maintenance Shop	River Bluff Middle School	Sandhill Elementary	Senior High School	Yahara Elementary
Miscellaneous	Auditorium Seating										5	
	Bleachers				2				3	3	4	3
	Classroom Equipment (Hoods, Kilns, etc.)								3	4	3	
	Elevator		4						4	3	5	
	Food Service Equipment					4	2		3	3	2	2
	Lockers				1		4	3	3	4	4	1
	Stage Curtains								4	3	4	
	Theater & Stage Equipment										4	
	Toilet Accessories	1	4	4	3	3	4	3	4	4	4	4
	Toilet Partitions	1	3		1	4	5	2	4	4	4	2
	Toilet Room Other				2	3			3			3
Plumbing	Fixtures (sinks, toilets, urinals, etc.)		3		1	2	3	2	3	3	3	2
	Grease Interceptor						2		3	3	3	3
	Piping & Distribution	1	3		3	3	3	3	3	3	3	2
	Pumps & Valves	1	3		3	3	3	3	3	3	3	2
	Utilities	1	3		3	3	3	3	3	3	3	3
	Water Heaters	1	3		3	2	4	2	3	3	3	3
Roofing	Drains, Gutters & Downspouts	3	4	2	3	4	3	3	4	4	4	3
	Ponding Water		4		1	5	5	5	5	5	4	2
	Roofing Membrane	3	3	4	3	3	4	3	4	4	3	1
	Skylights & Hatches				2	4			4	4	4	
Structural System	Structural Framing	1	4	3	3	3	4	4	4	4	4	3

BUILDING AND SITE CAPACITY

The **Building Capacity Analysis** provides an objective perspective on the number of students that can be reasonably accommodated in an educational facility. Multiple methodologies are used to generate this number, and can be compared and contrasted to obtain a more complete understanding of building potential. Calculations are based on industry best practices and nationally recognized educational planning recommendations. It is important to note that space needs for schools have increased significantly in recent years.

The following table summarizes the functional capacity of each district facility verses actual enrollment. For a more complete understanding of space needs, calculation methodologies, and an in-depth analyses of building utilization, please refer to section 3 of this report.

BUILDING CAPACITY				
BUILDING	CURRENT ENROLLMENT (SEPTEMBER 2017)	FUNCTIONAL CAPACITY BY DISTRICT DESIRED CLASS SIZE [b]	FUNCTIONAL CAPACITY BY LEARNING AREA [c]	CAPACITY BASED ON GROSS BUILDING AREA [d]
Fox Prairie Elementary	381 students	410 students	416 students	340 students
Kegonsa Elementary	333 students	497 students	489 students	371 students
Sandhill Elementary	479 students	569 students	609 students	609 students
River Bluff Middle School	662 students	702 students	741 students	515 students
Stoughton High School	935 students	1476 students	1376 students	1014 students

a Based on 55 SF per Kindergarten student, 35 SF per student grades 1-5, and 30 SF per student for general classrooms grades 6-12. Science Rooms, FACE Labs, and Art Rooms use 50 SF per student. Tech Ed Lab spaces use 50-100 sq. ft. per student depending on the academic focus.

b. Based on recommended students per instructor as provided by Stoughton Area School District

c. Functional Design Capacity is 90% of maximum capacity at elementary, and 80% of the maximum capacity in intermediate and high schools.

d. Based on 150 SF per student at Elementary, 180 SF per student at Intermediate, and 230 SF per student at High School

As part of the capacity analyses, the size of each building site was also assessed against rule-of-thumb recommendations for a new school of similar enrollment. The table below summarizes the findings of this analyses. See Section 3 of this report for more detailed information and analyses of site conditions at each school.

SITE CAPACITY				
BUILDING	EXISTING SITE SIZE	ENROLLMENT (SEPTEMBER 2017 DPI)	RECOMMENDED SITE SIZE (BASED ON ENROLLMENT)	EXISTING BUILDING SIZE (SQUARE FEET) [d]
Fox Prairie Elementary	15.0 acres	381 students	14 acres [a]	51,000 sf
Kegonsa Elementary	13.7 acres	333 students	13 acres [a]	55,600 sf
Sandhill Elementary	19.2 acres	479 students	15 acres [a]	91,300 sf
River Bluff Middle School	12.0 acres	662 students	27 acres [b]	92,700 sf
Stoughton High School	47.2 acres	935 students	39 acres [c]	250,700 sf

a. Based on 10 acres plus one additional acre for each 100 students at Elementary School.

b. Based on 20 acres plus one additional acre for each 100 students at Middle School.

c. Based on 30 acres plus one additional acre for each 100 students at High School.

d. Based on 150 SF per student at Elementary, 180 SF per student at Intermediate, and 230 SF per student at High School.

EDUCATIONAL ADEQUACY ASSESSMENT

The **Educational Adequacy Assessment (EAA)** is a comprehensive review of the educational program activities, use of the building, and physical spaces required for each activity. The EAA provides an analysis of how effectively the spaces support student learning and program delivery. The findings below are created from field observations, interviews with building principals and staff, and analyses of available building plans.

The following tables provide an overview of EAA findings for each building. For floor plans, analyses, and more in-depth information, please refer to section 4 of this report.

Fox Praire Elementary School

CRITERIA	OBSERVATION HIGHLIGHTS	EVALUATION
SITE	Site is generously sized with ample room for playground structures, hard-surface playground areas, and green space. Drainage issues, however, restrict usability portions of the site. Parent pick-up and drop-off areas are separated from parking and bus areas, however there is insufficient queuing space for parents, which can create significant backups and congestion at the street.	FAIR
SAFETY	Exterior doors are locked, and visitor entry requires buzz in from the office. However, once visitors are inside the building they have full access to the entire building and are not restricted to the office area. A security camera system is in place, and plans are currently underway to expand this system. Exterior doors are not electronically monitored, and classroom doors are not equipped with intruder hardware.	FAIR
SIZE & PROPORTION	Most classrooms are appropriately sized for large group classroom uses.	GOOD
SPACE TYPE & ADJACENCY	Classrooms generally work well for large group and lecture uses. However, there is little space available outside the primary classroom for breakout group work, collaboration, or personalized interventions. Shared Gymnasium/Cafeteria space can create scheduling conflicts. Areas for specialists and special education in several cases have been adapted from standard classrooms and are not designed for their current uses.	FAIR
EQUIPMENT & INFRASTRUCTURE	Wireless Internet access is available throughout the building. Classrooms are equipped with smart boards and chrome books are widely used. Electrical outlets are often in short supply. Some science casework upgrades are needed, and in some cases outdated chalkboards still need to be removed.	GOOD
FURNITURE	Furniture in much of the building is heavy and difficult to reconfigure. This limits the flexibility of the education spaces and does not support reconfiguration for group work or student-centered learning strategies.	POOR
ENVIRONMENT	Learning spaces are generally well-maintained and in good shape. Some classrooms, however, lack access to natural light, and overall building finishes can feel somewhat institutional.	FAIR

KEY

GOOD	Most of criteria assessed was found to be acceptable and satisfied its purpose
FAIR	Some of the criteria assessed was found to be acceptable, while other criteria assessed was unacceptable and did not satisfy its purpose
POOR	Most of criteria assessed was found to be unacceptable and did not satisfy it's purpose

Kegonsa Elementary School

CRITERIA	OBSERVATION HIGHLIGHTS	EVALUATION
SITE	Site is generously sized with ample play structures and green space, and with a very large hardsurface playground area. Significant drainage issues, however, at time can restrict usability of green space. Parent pick-up and drop-off areas are separated from parking and bus areas, however there is insufficient queuing space for parents, which can create significant backups and congestion at the street.	**FAIR**
SAFETY	Exterior doors are locked, and visitor entry requires buzz in from office. However, once visitors are inside the building they have full access to the entire building and are not restricted to the office area. A security camera system is in place, and plans are currently underway to expand this system. Exterior doors are not electronically monitored, and classroom doors are not equipped with intruder hardware.	**FAIR**
SIZE & PROPORTION	Most classrooms are appropriately sized for large group classroom uses. Two kindergarten rooms are undersized for their current use, and lack typical amenities for kindergarten aged students.	**FAIR**
SPACE TYPE & ADJACENCY	Classrooms generally work well for large group and lecture uses. A few available classrooms are now used to serve as project and group space, however these spaces have not been re-designed to work well for these uses. Shared Gymnasium/Cafeteria space can create scheduling conflicts. Areas for specialists and special education in several cases have been adapted from standard classrooms, and are not designed for their current uses.	**FAIR**
EQUIPMENT & INFRASTRUCTURE	Wireless internet access is available througout the building. Classrooms are equipped with smart boards and chrome books are widely used. Electrical outlets are often in short supply. In some cases outdated chalkboards still need to be removed.	**GOOD**
FURNITURE	Furniture in parts of the building have been updated to be much more flexible and allow for easier configuration. Some older, less flexible furniture, however, remains. Flexible furniture can often play a key role towards encouraging student collaboration, project-based work, and other student-centered learning strategies.	**FAIR**
ENVIRONMENT	Learning spaces are generally well-maintained and in good shape. Recent paint schemes have brought some energy and life to the building, but overall building aesthetics can still feel somewhat institutional.	**FAIR**

Sandhill Elementary School

CRITERIA	OBSERVATION HIGHLIGHTS	EVALUATION
SITE	Site is generously sized with ample room for hard surfaced areas, play structures, and green space. Slope of site can create mild challenges, but is still very functional. Parent pick-up and drop-off areas are mostly separated from bus areas, but all vehicles enter and exit at one location, which can create congestion.	**FAIR**
SAFETY	Exterior doors are locked, and visitor entry requires buzz in from office. However, once visitors are inside the building they have full access to the entire building and are not restricted to the office area. A security camera system is in place, and plans are currently underway to expand this system. Exterior doors are not electronically monitored, and classroom doors are not equipped with intruder hardware.	**FAIR**
SIZE & PROPORTION	Most classrooms are appropriately sized for large group classroom uses. Kindergarten rooms are inconsistent in size and lack in-room toileting.	**GOOD**
SPACE TYPE & ADJACENCY	Classrooms generally work well for large group and lecture uses. Adjacent spaces in the core of the building allow for breakout groups and interventions to occur adjacent to classrooms. Additional transparency or openness could further enhance these opportunities.	**GOOD**
EQUIPMENT & INFRASTRUCTURE	Wireless internet access is available throughout the building. Classrooms are equipped with smart boards and Chromebooks are widely used. Electrical outlets at times can be in short supply.	**GOOD**
FURNITURE	Furniture in parts of the building have been updated to be much more flexible and allow for easier reconfiguration. Some older, less flexible furniture, however, remains. Flexible furniture can often play a key role towards encouraging student collaboration, project-based work, and other student-centered learning strategies.	**FAIR**
ENVIRONMENT	Learning spaces are generally well-maintained and in good shape, but overall building aesthetics can feel somewhat institutional. Building formally served as a middle school, and environment can feel more appropriate for older students than for current ages served.	**FAIR**

River Bluff Middle School

CRITERIA	OBSERVATION HIGHLIGHTS	EVALUATION
SITE	Site is very tight. Outdoor space available for PE and recess is limited. Staff parking is shared between the school and the administration building, and often fills up. Parent pick-up and drop-off routes cross bus pick-up and drop-off routes, and students who walk cross paths with vehicles creating congestion and safety concerns.	POOR
SAFETY	The building lacks a secure main entry. The main office location requires the use of a secondary welcoming station to monitor visitors. A security camera system is in place, and plans are currently underway to expand this system. The building also lacks visual connection between learning spaces and adjacent common areas, limiting visual supervision of students outside of the classroom.	FAIR
SIZE & PROPORTION	Most classrooms are appropriately sized for large group classroom uses. Gymnasium is undersized, requiring students to use Community gymnasium facilities across the street. Corridors and stairways become congested during passing times. There are few restroom options available for students with privacy concerns.	FAIR
SPACE TYPE & ADJACENCY	Classrooms generally work well for large group and lecture uses. However, there is little space available outside the primary classroom for breakout group work, collaboration, or personalized interventions. Areas for specialists and special education in several cases have been adapted from standard classrooms and are not designed for their current uses. There is limited space available for Occupation and Physical Therapy, or for other sensory integration spaces when needed for I.E.P.'s.	FAIR
EQUIPMENT & INFRASTRUCTURE	Wireless Internet access is available throughout the building. Classrooms are equipped with smart boards and chrome books are widely used. Electrical outlets at times can be in short supply.	GOOD
FURNITURE	Most classrooms use tables and chairs to facilitate group work and collaboration, however, some older sled desks are still in use. Lighter weight, more flexible furniture would further enhance flexibility for student collaboration, project-based work, and other student-centered learning strategies. Furniture upgrades are underway.	FAIR
ENVIRONMENT	Learning spaces are generally well-maintained and in good shape. Some classrooms, however, lack access to natural light, and overall the building finishes can feel somewhat institutional.	FAIR

Stoughton High School

CRITERIA	OBSERVATION HIGHLIGHTS	EVALUATION
SITE	High School site is functional, but somewhat limited in size. JV baseball and softball fields are located off site. Stadium is too narrow for competition soccer, and does not have accessible seating on the home side. Parking is also limited, with too few parking spaces for all student drivers and for events. Buses and parent/student traffic are not completely separated.	FAIR
SAFETY	Exterior doors are locked, and visitor entry requires buzz in from office. Visitors enter directly into office through a secure vestibule. A security camera system is in place, and plans are currently underway to expand this system. Exterior doors are not electronially monitored, and classroom doors are not equipped with intruder hardware.	FAIR
SIZE & PROPORTION	Classroom sizes are inconsistent in size, with many undersized for the number of students served. Commons/Food Service areas are undersized and do not support student-centered learning activities.	POOR
SPACE TYPE & ADJACENCY	Classrooms are configured for large group and lecture areas. There is little space available outside classrooms for breakout group work, collaboration, or personalized interventions. Areas for specialists and special education are limited, with few resource areas available. There is no dedicated space for Occupational and Physical Therapy. There are few restroom options available for students with privacy concerns.	POOR
EQUIPMENT & INFRASTRUCTURE	Wireless Internet access is available throughout the building. Classrooms are equipped with projectors or digital displays, and chrome books are widely used. Casework and Equipment for science labs and other specialty classroom is somewhat outdated.	GOOD
FURNITURE	Most classrooms use tables and chairs to facilitate group work and collaboration. Lighter weight, more flexible furniture would further enhance flexibility for student collaboration, project-based work, and other student-centered learning strategies.	FAIR
ENVIRONMENT	Learning spaces are generally well-maintained and in good shape. Many classrooms, however, lack access to natural light, and overall the building finishes can feel somewhat institutional.	FAIR

Yahara

CRITERIA	OBSERVATION HIGHLIGHTS	EVALUATION
SITE	Stoughton Area School District rents out the former Yahara Elementary School Site to Martin Luther Christian School and Pumpkin Patch Preschool. The site is still utilized by SASD for JV Softball and for gymnasium space. The site has adequate room for parking, playfields, and playgrounds based on its current uses. Separate drives on each side of the school could be used to separate bus and parent traffic if so desired.	GOOD
SAFETY	SASD Gymnasium can be locked off from Martin Luther Christian School for security purposes and after hours use. MLCS office is located in the center of the building which creates challenges for supervision of visitors. Doors are not monitored electronically, and classrooms are not equipped with intruder function hardware.	POOR
SIZE & PROPORTION	Classroom sizes are somewhat inconsistent, but are generally sufficient for large group classroom instruction. Library is generously sized and is currently underutilized. Gym and Cafeteria share a single space.	FAIR
SPACE TYPE & ADJACENCY	Classrooms are configured for independent large group use, however there the media center would be reconfigured to serve as breakout/resource space for many of the classrooms. There is no available breakout space for Pumpkin Patch wing classrooms.	FAIR
EQUIPMENT & INFRASTRUCTURE	Classroom Technology and infrastructure appears to be limited in most of the building. Most classrooms do not have digital displays, and many are still relying on chalkboards. Wireless Technology is not present (confirm).	POOR
FURNITURE	Classrooms utilize tables and chairs to facilitate small group work and flexible learning. Furniture is property of MLCS and appears to be various ages.	FAIR
ENVIRONMENT	The environment is functional but dated. Many of the finishes are beginning to show their age and feel worn. Several rooms lack natural light.	POOR

Historic 1892 Administration Building

CRITERIA	OBSERVATION HIGHLIGHTS	EVALUATION
SITE	The site for the historic administration building is shared between River Bluff Middle School and the current Administration Building. This site is very restricted already without additional pressure from this building. Challenges are detailed in the River Bluff Middle School Assessment.	POOR
SAFETY	In its current state, safety is a major concern. Egress, accessibility, fire protection measures, and other safety features would need to be addressed for any viable reuse of the space.	POOR
SIZE & PROPORTION	Classroom sizes are too small for large group instructional standards. Any redesign of the space would have to consider uses for small-group based instruction.	POOR
SPACE TYPE & ADJACENCY	Classrooms are configured around a central core. Because the structure is load-bearing masonry, creating transparency and interconnectivity between spaces would be challenging but not entirely impossible.	POOR
EQUIPMENT & INFRASTRUCTURE	All equipment and all infrastructure would need complete replacement if this building were to be used again.	POOR
FURNITURE	If the buiding were to be used again, all furniture would need to be purchased or relocated from elsewhere.	POOR
ENVIRONMENT	In its current state, the building is in serious disrepair. If the building were to be carefully renovated, there is potential to create an environment that could be unique and interesting.	FAIR

RECOMMENDED NEXT STEPS

At the conclusion of a Facilities Assessment, many school districts ask how to best proceed. It is our recommendation that the Administration closely review the document for content and understand the observations and recommendations.

For the Stoughton Area School District, the next step will involve sharing the key findings with the school board and broader community at a School Baord Meeting in early November 2018. It will be very helpful to gather initial feedback from a variety of district stakeholders to establish priorities for long-term facilities master planning.

From there, each recommendation can be prioritized in a way that best works with your funding strategy and shared for further community feedback. This will develop a phased approach to building your long-term facilities master plan and to resolving the most pressing facility needs at Stoughton Area School District.

Thank you for the opportunity to participate in this endeavor. If you have any questions or concerns regarding this summary, please feel free to contact the EUA team.

Sincerely,

Teresa Wadzinski,
Associate | Senior Project Manager

STOUGHTON
AREA SCHOOL DISTRICT

two:

CONDITION ASSESSMENTS

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CONDITION ASSESSMENTS

DATA GATHERING PROCESS

Team site visits took place in May and June 2018 and included EUA, Fredericksen Engineering, and Muermann Engineering.

The team met with administration, staff, and facilities staff to review priorities and concerns and gather general building information. The team walked through the buildings to conduct their own observations and analyses. Conditions observed were not field measured and require additional review if future action is to be taken.

UNDERSTANDING THE FACILITY ASSESSMENT

The **Building Condition Assessmen**t includes a comprehensive review of the building's exterior shell (roof, wall systems, windows/doors, etc.); interior finishes and materials (flooring, casework, etc.); mechanical, electrical, and plumbing systems; and compliance with the Americans with Disabilities Act (ADA) relative to accepted industry standards.

The building assessment involves visual assessment of current conditions, documentation of observations, and general recommendations for repair and/or replacement of building components or systems where necessary. On-site observations include the review of system and component age, construction methods, material adequacy, and longevity. The Facility Assessment compiles visual assessment data, meeting discussions, and source documents to identify known deficiencies.

The Facility Assessment does **NOT** include:

- Detailed validation of as-built conditions
- Hazardous material assessments
- Destructive testing or observation of concealed systems, below grade conditions, or components buried within walls, ceilings, or roofing systems
- Specific details about electrical panels, mechanical equipment, or plumbing components that are not readily visible
- Measurement of electrical loads or temperatures of any electrical equipment
- Actual efficiencies or performance testing of HVAC equipment (pumps, fans, boilers, etc.)
- Adequacy of fire or life safety components associated with building systems including code requirements, dampers, fire rating of systems, etc.
- Functionality and performance of the Plumbing equipment (pumps, water heaters, etc.)

Americans with Disabilities Act Assessment - The Americans with Disabilities Act (ADA) Assessment considers the compliance relative to accepted industry standards. A building's adherence with ADA is based on the review of the accessible routes to and through the building and site, as well as accessible features and accommodations inside the building as defined by ADA design guidelines and the International Building Code.

FOX PRAIRIE ELEMENTARY SCHOOL

Condition Assessment

See APPENDIX for detailed information.

Year Built: 1990 (additions/renovations in 1992)
Site Size: 15 acres
Building Size: 51,414 sq. ft.
Current Enrollment (Sept. 2017): 384
Grade Levels: K-5

GENERAL COMMENTS ON FOX PRAIRIE ELEMENTARY SCHOOL

- Some site drainage issues with ponding water and erosion.
- Exterior elements including windows, doors, and brick facade showing signs of age.
- Many of the interior finishes are aging and in poor condition.
- Overall the building is well ventilated by the mechanical system.
- The majority of electrical systems are in good working condition.
- The overall plumbing system, fixtures and equipment are in fair condition from normal use, some upgrades are required.

Original Building (1990)

Addition (1992)

FOX PRAIRIE - ELEMENTARY SCHOOL

Historic Plans

© Eppstein Uhen Architects, Inc.

Category	Topic	Comment	Fox Prairie Elementary
ADA	Accessible Entry(s)	Some differential settlement between exterior door stoop and adjacent pavement noted at east and south doors.	4
	Accessible Parking	Accessible stalls and striped paths to entry provided.	5
	Accessible Restrooms	Most restroom amenities are accessible. Some amenities are encroaching on accessible clearances. A couple restrooms do not have required grab bars.	4
	Accessible Route	Typical classrooms sinks do not meet current ADA requirements, which is typical for age. Mix of newer accessible drinking fountains, and older fountains that do not meet current ADA requirements. Door hardware is compliant.	3
	Exterior Stairs, Ramps & Rails	Guardrails on ramp to playground have openings larger than 4", and there is a significant change of level between end of ramp and adjacent asphalt. Both instances do not meet current ADA requirements.	2
	Passenger Loading Zone		5

Category	Topic	Comment	Fox Prairie Elementary
Civil / Site	Athletic Field Support Spaces		3
	Athletic Fields	Worn patches at high-traffic portions of the athletic fields. Equipment aging.	3
	Gates & Fencing		5
	Irrigation System	A number of downspouts drain out near entry. Erosion apparent between asphalt and soft-surface playgrounds, significant at the few collection points where water drains off of the southeast corner of the asphalt play surface.	2
	Landscaping	Areas of washout where snow is plowed into grass.	4
	Maintenance (Dock, Trash, Util.)		4
	Pedestrian Access		4
	Playground Equipment	Two newer sets of equipment and one older set, which has some wear to finishes.	4
	Sidewalks & Pavement	Range of conditions from like-new at the main parking lot, to poor condition at playground asphalt. A few locations where damaged sidewalk or asphalt could cause a tripping hazard. Further Reference 2016 Pavement Maintenance and Replacement Study included in Appendix.	3
	Site Amenities (Furniture, etc.)	Some newer site furniture.	5
	Site Signage	Monument sign has average wear for age.	3

Category	Topic	Comment	Fox Prairie Elementary
Electrical	Arc Flash Study	- No arc flash labels were observed; complete arc flash study on all distribution equipment in building and install detailed labels.	1
	CCTV	- Intermediate camera coverage. IP cameras noted interior at Main Entry and exterior at majority of building perimeter. - New cameras are scheduled for installation during 2018 - 2019 year.	5
	Communications Systems	-CareHawk CH1000 intercom headend installed 2011. Interfaced with phone system and Singlewire emergency notification software.-Speakers were not replaced when headend was replaced and are original to the 1990 and 1992 construction; consider replacement.-American Time SSQMSTR cellular controlled master clock / transmitter and battery-operated analog wireless clocks installed 2011.	3
	Data	- All existing cabling is terminated in two telecommunications rooms (Rms 312& East Mech). - All Cat5 cabling is scheduled to be replaced with Cat6A cabling Summer 2018. - Wireless access points are installed throughout building.	5
	Distribution Panelboards	-Cutler-Hammer branch circuit panels original to 1990 (qty 7) and 1992 (qty 1) construction; replacement recommended within 6-8 years.	4
	Fire Alarm System	-Simplex 4100ES control panel recently installed, however, notification and initiation devices original to 1990 and 1992 construction. -The system is operational and is tested annually. -Expected life for any fire alarm system is < 25 years due to changes in Code and technology which affects serviceability.-Recent Code change requires a voice-annunciated system which can be used for all emergencies in lieu of tones for new/upgraded systems.-Corridors have open cubbies; current Code requires smoke detectors in these Corridors.	1
	Generator System	-No generator. At District discretion, consider adding to support data network with a longer back-up power runtime than local UPS provides as more systems are converted to IP-systems (i.e. security cameras, emergency communication, access control, etc.).	3

Category	Topic	Comment	Fox Prairie Elementary
Electrical	Intrusion Alarm	- Maxsys alarm system with motion sensors in Gym/Receiving Area, Main Entry, IMC/Classroom Corridor, Room 200, and Classroom Corridor Exit with keypads at Receiving and Main Entry. - Replacement recommended if integration with Keyless Entry and/or Security Camera System is desired as existing system cannot be integrated.	2
	Keyless Entry	- Andover, conventional (non - IP) system is functional and meets current needs. Approximately 5 exterior doors are controlled. - AIPHONE JK - DA entry intercom installed at Main Entry vestibule to provide communication with JK - 1MED monitor in main office.	5
	Lighting	-Majority of interior lighting fixtures in Classrooms are tunable LED type. Handful of areas, such as corridor, utilize 4' T8 fluorescent lamps.-Consider replacing remaining T8 fluorescent fixtures with LED type fixtures. District has assembled a detailed lighting study.-Emergency egress lighting and exit lights provided with separate battery-powered unit equipment; upgraded since original construction.-No exterior emergency egress lighting outside of exit doors.	4
	Lighting Control	-Majority of interior lighting controlled with occupancy sensors and/or dual-level switching.	5
	Low Voltage Switchgear & Distribution	-Cutler-Hammer service distribution switchboard with external surge protection device original to 1990 construction. -Minimal breaker mounting space available; may require replacement to accommodate additional loads.-Biannual testing and cleaning of main service disconnect is completed ensuring proper operation.	4
	Power Devices	-In comparison to new construction, general receptacles are deficient in some instructional areas. Add at District discretion.	3
	Site Lighting	-Exterior pole mounted and building mounted lighting has been upgraded to LED type fixtures.-Exterior lighting controlled via photocell and timeclock schedules.	5
	Site Utilities (transformers, etc.)	-1,600-amp 120/208-volt 3-phase 4-wire service original to 1990 construction; no known issues. Peak demand 140.6kW = 488-amps	5

Category	Topic	Comment	Fox Prairie Elementary
Exterior Enclosure	Exterior Cladding	Around a dozen instances observed of brick veneer cracking, spalling, or damaged in various locations.	3
	Exterior Doors	Corrosion starting and finishes worn or deteriorating on many of the doors.	2
	Exterior Sealants	Window sealant in good condition, sealant at brick veneer control joints aging.	4
	Louvers & Vents		3
	Windows, Storefronts & Curtainwalls	Finish on south-facing windows deteriorating from sunlight, damage to some screens.	3
Foundation	Foundation & Frost Walls	Some minor cracks and spalling observed near the top of foundation walls, continue to monitor.	2
	Slab on Grade	One interior location where the slab has shifted and settled that has caused the floor finish to crack.	3
Interior	Casework & Millwork	Most casework is in poor condition. Laminate chipping and wear and tear that's typical for age.	2
	Ceiling Finish	Most ceilings are damaged, sagging, worn, and stained. Some grids are corroding.	2
	Ceiling Other	One location was damaged and stained due to water damage.	2
	Coiling Shutters & Grilles		4
	Floor Finish	Most floor finishes are old, worn and damaged with some newer floor finishes.	2
	Gym/Sports Flooring		4
	Interior Doors, Frames & Hardware	Damage to some doors, most showing signs of wear and tear from age.	2
	Stairs & Handrails		4
	Wall Finish Condition	Some locations of wear, damaged, chipping and pealing. Typical for age.	3
	Window Treatments	Few and minor damages. Typical for age.	3

Category	Topic	Comment	Fox Prairie Elementary
Mechanical	Air Handlers	Small packaged rooftop unit serves office area. Age of unit is unknown but appears to have exceeded expected life of 12-15 years. AHU/Makeup air unit in the garage is original and has exceeded its expected life of 25-30 years.	3
	Chillers & Cooling	Mini split unit located on the roof is in fair condition, but is nearing life expectancy.	3
	Controls	Standalone controls are in fair condition, as expected.	3
	Ducts & Distribution		3
	Dust Collection	Dust collector serves shop area ductwork. Unit is very old and in poor condition. It has exceeded expected life of 20-25 years.	2
	Exhaust Fans	Roof-mounted exhaust fans are in satisfactory condition.	3
	Unit Heaters	Gas fired unit heaters serve garage spaces. Appear to be in satisfactory condition.	3
Miscellaneous	Food Service Equipment		4
	Toilet Accessories	Some wear and damage.	3
	Toilet Partitions		4
	Toilet Room Other	Some floor and wall tile is cracked or damaged.	3

Category	Topic	Comment	Fox Prairie Elementary
Plumbing	Fixtures (sinks, toilets, urinals, etc.)	Restroom (Multiple-use): Men's only, No showers. Breakroom: Stainless steel drop-in sinks with goose neck spout faucets. Mop Sink & Eye Wash Station: Hose Bibbs: Frost proof	2
	Piping & Distribution	Water: Copper pipes and fittings Drain, Waste and Vent: Cast Iron drain and waste, Galvanized vents. Repaired sections are with PVC. Storm: none.	3
	Pumps & Valves	Water Distribution System: Ball valves on main piping; Ball valves on branch piping. Hot Water Circulation: Over one minutes to get hot water at most remote distance from water heater.	3
	Utilities	Water: 1.5" water service with 1" main water meter. Water is supplied by the local municipal water system. Current water service is not capable of to support an automatic fire sprinklers system. If an automatic fire sprinklers system is required for any building addition or remodeling, a min 6" water service will be required per flow test report and calculations. Fire Sprinklers: None Sanitary: Sanitary is supplied by the local municipal sewer system. Storm: No interior piping and down spouts discharge to grade.	3
	Water Heaters	Water Heater: old residential type gas 40 gallon. Air Compression, Dryers & Filters: 20 gallon oiled operated.	2

			Fox Prairie Elementary
Roofing	Drains, Gutters & Downspouts	Gutters and downspouts generally in good condition, some issues with where water is conducted on site.	4
	Ponding Water		5
	Roofing Membrane	A number of locations where ballast has washed away, and felt underlayment has deteriorated. Further Reference 2014 Roofing Report by Apex Building Consultants included in Appendix.	3
	Skylights & Hatches		4
Structural System	Structural Framing	Some minor cracking and shifting. Typical for age.	3

KEGONSA ELEMENTARY SCHOOL

Condition Assessment

See APPENDIX for detailed information.

Year Built: 1962 (additions/renovations in 1982 and 1996)
Site Size: 13.7 acres
Building Size: 54,960 sq. ft.
Current Enrollment (Sept. 2017): 337
Grade Levels: K-5

GENERAL COMMENTS ON KEGONSA ELEMENTARY SCHOOL

- Site drainage and ponding issues at multiple locations on the site.
- Playground asphalt is in poor condition.
- Minimal amount of ADA accessible toilet fixtures in the building.
- Many of the wood windows are in poor condition.
- Exterior brick & metal panel are in good condition, EIFS material showing some signs of age.
- Most classroom flooring is very worn, signs of possible floor slab moisture barrier issues in a few locations. Most other interior finishes also showing wear and deterioration from age.
- The portions of the building that were upgraded in 2011 are well ventilated by the mechanical system. Similar upgrades to the west classrooms should be performed.
- A number of electrical systems need attention. The branch circuit panels which are original to the 1982 and 1962 construction should be replaced.
- The overall plumbing system, fixtures and equipment are at the end of their lifecycle and require upgrades.

KEGONSA - ELEMENTARY SCHOOL

Historic Plans

Category	Topic	Comment	Kegonsa Elementary
ADA	Accessible Entry(s)		4
	Accessible Parking	Stalls provided, accessible stall in west lot could be located closer to main entry.	4
	Accessible Restrooms	Very minimal amount of accessible toilet fixtures. As improvements are made to the building, restrooms should continually be upgraded to comply with ADA.	2
	Accessible Route	Non accessible cafeteria fold down tables. Some classroom sinks/drinking fountains do not meet current ADA requirements.	3
	Passenger Loading Zone		4
Civil / Site	Athletic Field Support Spaces	Dugout benches in good condition.	4
	Athletic Fields	Field equipment is worn, area in grass worn down from kickball.	2
	Gates & Fencing		3
	Irrigation System	Ponding at multiple locations on the south side of building, drainage issues reported near main entrance as well.	2
	Landscaping		4
	Maintenance (Dock, Trash, Util.)		3
	Pedestrian Access		5
	Playground Equipment	Overall equipment is in fair condition, with wear to finishes.	3
	Sidewalks & Pavement	Parking lots overall in fair condition, playground surfaces in poor condition. Further Reference 2016 Pavement Maintenance and Replacement Study Report by JSD Professional Services and CGC, Inc. included in Appendix.	3
	Site Amenities (Furniture, etc.)	Benches & tables in good condition, some wear to storage shed wood siding.	4
	Site Signage		4

Category	Topic	Comment	Kegonsa Elementary
Electrical	Arc Flash Study	- No arc flash labels were observed; complete arc flash study on all distribution equipment in building and install detailed labels.	1
	CCTV	- Intermediate camera coverage. IP cameras noted interior at Main Entry and exterior at majority of building perimeter. - New cameras are scheduled for installation during 2018 - 2019 year.	5
	Communications Systems	-CareHawk CH1000 intercom headend installed 2011. Interfaced with phone system and Singlewire emergency notification software.-Speakers were not replaced when headend was replaced and are original to the 1982 and 1996 construction; consider replacement.-American Time SSQMSTR cellular controlled master clock / transmitter and battery-operated analog wireless clocks installed 2011.	3
	Data	- All existing cabling is terminated in one telecommunications room (Rm 41). - All Cat5 cabling is scheduled to be replaced with Cat6A cabling Summer 2018. - Wireless access points are installed throughout building.	5
	Distribution Panelboards	-Kinney branch circuit panels original to 1962 (qty 5) construction; replacement recommended immediately.-Square D branch circuit panels original to 1982 (qty 2) construction; replacement recommended immediately.-Remaining (4) branch circuit panels original to 1996 construction or 2011 HVAC upgrades; replacement not recommended for 8-10 years.	5
	Fire Alarm System	-Simplex 4100ES control panel recently installed, however, notification and initiation devices appear to have been installed in 1996. -The system is operational and is tested annually.-Expected life for any fire alarm system is < 25 years due to changes in Code and technology which affects serviceability.-Recent Code change requires a voice-annunciated system which can be used for all emergencies in lieu of tones for new/upgraded systems.	2
	Generator System	-No generator. At District discretion, consider adding to support data network with a longer back-up power runtime than local UPS provides as more systems are converted to IP-systems (i.e. security cameras, emergency communication, access control, etc.).	3

Category	Topic	Comment	Kegonsa Elementary
Electrical	Intrusion Alarm	- Maxsys alarm system with motion sensors in Classroom Corridors, IMC, and Computer Room with keypads at receiving and Main Entry. - Replacement recommended if integration with Keyless Entry and/or Security Camera System is desired as existing system cannot be integrated.	2
	Keyless Entry	- Andover, conventional (non - IP) system is functional and meets current needs. Approximately 5 exterior doors are controlled. - AIPHONE JK - DA entry intercom installed at Main Entry vestibule to provide communication with JK - 1MED monitor in main office.	5
	Lighting	-Majority of interior lighting fixtures utilize 4' T8 fluorescent lamps with electronic ballasts. Handful of areas with compact fluorescent. -Other than Gymnasium, fixtures appears to be original to 1982 and 1996 construction.-Consider replacing fluorescent fixtures with LED type fixtures. District has assembled a detailed lighting study.-Emergency egress lighting and exit lights provided with separate battery-powered unit equipment; upgraded since original construction.-No exterior emergency egress lighting was noted immediately outside of exit doors.	3
	Lighting Control	-Majority of interior lighting controlled with occupancy sensors and/or dual-level switching. -If spaces are renovated or new light fixtures are provided; replace existing dual-level switching with dimmer switches.	5
	Low Voltage Switchgear & Distribution	-Square D service distribution panel with external surge protection device original to 1996 construction. -Minimal breaker mounting space available; may require replacement to accommodate additional loads.-Biannual testing and cleaning of main service disconnect is completed ensuring proper operation.	5

Category	Topic	Comment	Kegonsa Elementary
Electrical	Power Devices	-In comparison to new construction, general receptacles are deficient in some instructional areas constructed in 1962 and 1982. Add at District discretion.	3
	Site Lighting	-Exterior pole mounted and building mounted lighting has been upgraded to LED type fixtures.-Exterior lighting controlled via photocell and timeclock schedules.	5
	Site Utilities (transformers, etc.)	-1,200-amp 120/208-volt 3-phase 4-wire service original to 1996 construction; no known issues. Peak demand 193.8kW = 673-amps	5

Category	Topic	Comment	Kegonsa Elementary
Exterior Enclosure	Exterior Cladding	Brick and metal panel is in good condition. EFIS is in fair condition with some patching.	4
	Exterior Doors	Some doors have a worn finish and corrosion at the base of the frame.	3
	Exterior Sealants	Masonry joint sealants are failing. Window sealants are in good condition.	3
	Louvers & Vents		4
	Windows, Storefronts & Curtainwalls	Newer windows in original portion of building and 1996 addition are in good condition.	4
	Wood Windows	Exterior wood windows leak and are rotting. 1982 addition windows are older and worn.	2
Foundation	Dampproofing & Waterproofing		4
	Foundation & Frost Walls		4
	Slab on Grade	Signs of possible moisture barrier issues in a few locations.	3
Interior	Casework & Millwork	Numerous instances of delamination, chipping, and deterioration. Typical for age.	2
	Ceiling Finish	Majority of the ceiling tiles are starting to sag, as is typical over time. Toilet room grid has rust.	3
	Coiling Shutters & Grilles	Damage to cafeteria coil door housing.	4
	Floor Finish	Signs of possible moisture barrier issues in a few locations. Most classroom flooring is very worn.	2
	Interior Doors, Frames & Hardware	Minor wear and tear to most doors and frames.	3
	Wall Finish Condition	General wear and tear with some degradation.	3
	Window Treatments		4

Category	Topic	Comment	Kegonsa Elementary
Mechanical	Air Handlers	AHU's serving west classrooms, IMC, and Gymnasium were installed in 2011 and are in good condition. With good maintenance should last another 20 years.	5
	Air Handlers 2	The AHU serving the east classrooms were installed as a part of the 1982 addition. Plans should be made for replacement of this unit.	2
	Air Terminals (VAV, FPVAV)	VAV boxes in west/center classroom and IMC were installed in 2011.	5
	Boilers	17 year old modular boilers. Typical life expectancy is 20-23 years.	3
	Chillers & Cooling	Cooling provided by air cooled condensing units. Units serving east classrooms, IMC, and office were installed in 2011. No AC in the Gym.	4
	Chillers & Cooling 2	Unit serving west classrooms was installed in 2001. Plans should be made for replacement of this unit.	2
	Controls	DDC controls are in good condition. Updating west classroom AHU from constant volume to VAV with VFD's would improve energy efficiency.	4
	Ducts & Distribution		3
	Exhaust Fans		4
	Fan Coils, Unit Ventilators	A fan coil unit serves the Office area. There are temperature complaints with the system.	3
	Piping/Insulation	No issues reported. Pipe insulation at West Classroom CCU is in poor condition.	3
	Pumps	No issues reported.	3
	Wall Fin Radiation	Fin pipe is the main source of heat in the 1982 addition.	3
Miscellaneous	Food Service Equipment	Legs and areas under counter on many pieces of equipment are corroding from age. Stainless steel work surfaces are generally in good condition.	2
	Lockers	Very minor wear.	4
	Toilet Accessories		4
	Toilet Partitions		5

Category	Topic	Comment	Kegonsa Elementary
Plumbing	Fixtures (sinks, toilets, urinals, etc.)	Restroom (Multiple-use): Toilets - wall mounted with sensor flush valves; Lavatories - integral with metering and sensor faucets; Urinal - floor mounted with sensor flush valves. Restroom (Single-use): Toilets - wall mounted with flush valves; Lavatories - integral with metering and manual faucets. Electric Water Coolers with bottle Filling Station: in compliance per ADA standards. Locker Room / Showers: General shower areas are not in use. One private shower is in use. One private shower is in use. Classroom: Stainless steel drop-in sinks with goose neck spout faucets. Some with drinking fountain faucet. Some sinks only have cold water supplied to them. Art: Stainless steel drop-in sinks with goose neck spout faucets. Need solid interceptor per code. Kitchen: Sinks, drains and faucets were recently replaced. Replace PVC drain serving the High Temp dish machine with cast iron or sch. 80 CPVC piping.	3
	Grease Interceptor	Grease Interceptor: Zurn 20gpm - over 20yrs old - Grease interceptor is too small for a dish machine and wash sink flowing through it.	2
	Piping & Distribution	Water: Galvanized and Copper pipes and fittings. Drain, Waste and Vent: Cast Iron drain and waste, Galvanized vents. Repaired sections are with PVC. Storm: Cast Iron interior storm piping system.	3
	Pumps & Valves	Water Distribution System: Ball and gate valves on main piping; Ball valves and gate valves on branch piping. Hot Water Circulation: Over two minutes to get hot water at most remote distance from water heater. Rebalance system and pump. Backflow Preventer: Watts VB - to serve irrigation system. Backflow Preventer: Watts RPZ - to serve mechanical system's hot water heating boilers.	3

Category	Topic	Comment	Kegonsa Elementary
Plumbing	Utilities	Water: 3" water service with 2" main water meter and 2" bypass water meter. Water is supplied by the local municipal water system. Current water service is not capable of to support an automatic fire sprinklers system. If an automatic fire sprinklers system is required for any building addition or remodeling, a min 6" water service will be required per flow test report and calculations. Lawn Irrigation system with without meter. Fire Sprinklers: None. Sanitary: Sanitary is supplied by the local municipal sewer system. Storm: None. Down spouts discharge to grade.	3
	Water Heaters	Water Heater: AO Smith BTH-250 80gallon with 100gallon storage tank - 120degree (General Areas and Kitchen). Water Softener: Hellenbrand - provides soft water for the hot water distribution system.	4

Category	Topic	Comment	Kegonsa Elementary
Roofing	Drains, Gutters & Downspouts		3
	Ponding Water	One location where a vent penetration prevents water from draining.	5
	Roofing Membrane	Standing seam roof generally in good condition. Some minor damage to ice-stops and a couple vent caps. Paint peeling off and corrosion at a few locations. Further Reference 2014 Roofing Report by Apex Building Consultants included in Appendix.	4
Structural System	Structural Framing		4

SANDHILL ELEMENTARY SCHOOL

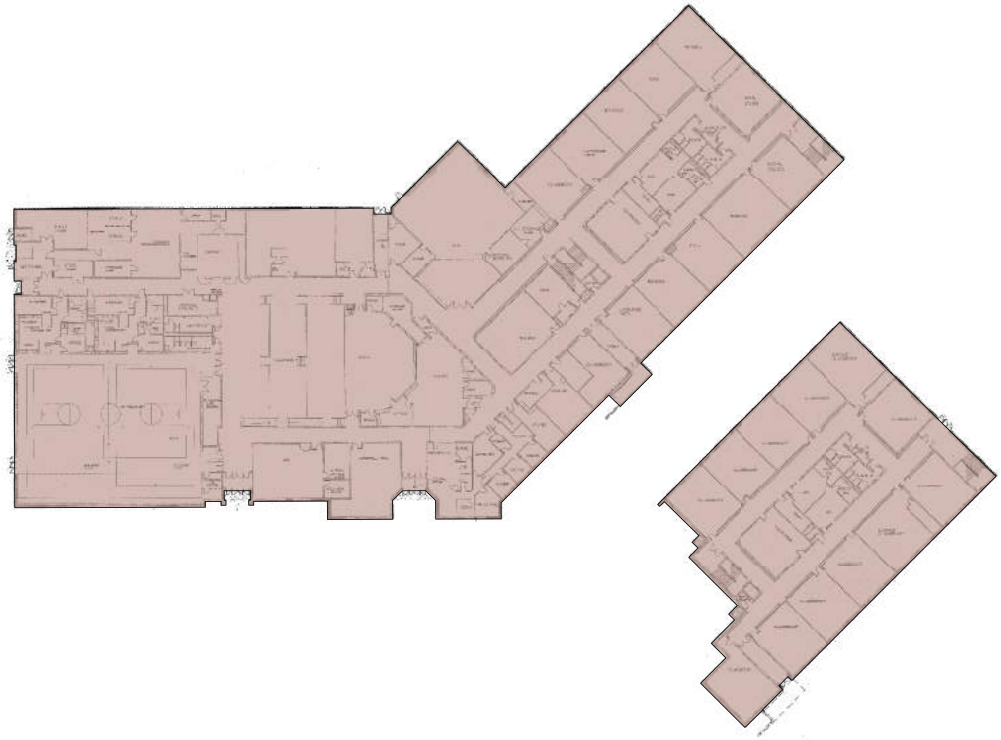
Condition Assessment

See APPENDIX for detailed information.

Year Built: 1997
Site Size: 19 acres
Building Size: 94,711 sq. ft.
Current Enrollment (Sept. 2017): 477
Grade Levels: K-5

GENERAL COMMENTS ON SANDHILL ELEMENTARY SCHOOL

- Site asphalt surfaces are in poor condition. Water drainage issue at door 3.
- Amenities with a level of accessibilty typical for time of construction are provided.
- Exterior masonry and EIFS systems starting to show some wear. Most sealant is deteriorated.
- Wood windows are in poor condition.
- Interior finishes are in fair condition, most show some wear & tear from use.
- Overall the building is well ventilated by the mechanical system.
- The majority of electrical systems are in good working condition and do not require attention. Adding general convenience receptacles would improve functionality of some specialty spaces.
- The overall plumbing system, fixtures and equipment are in fair condition from normal use.



Original Building (1997)

SANDHILL - ELEMENTARY SCHOOL

Historic Plans

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Category	Topic	Comment	Sandhill Elementary
ADA	Accessible Entry(s)	Main entrance is compliant. Asphalt has settled lower than adjacent entry stoops at a number of exterior doors on south & west side of building.	3
	Accessible Parking		4
	Accessible Restrooms	Most restroom amenities are accessible. Fixture clearances at a few locations do not meet current ADA requirements.	4
	Accessible Route	Accessibility amenities typical for age. Some items do not meet current ADA requirements.	4
	Exterior Stairs, Ramps & Rails	Guardrail at stone retaining wall has large openings between rails. Codes have since evolved to limit the size of these openings.	3
	Passenger Loading Zone	No curb cut at secondary entrance.	3
Civil / Site	Athletic Field Support Spaces	Lots of additional field support space.	4
	Athletic Fields	Fields are in good condition. Soccer goals are corroding.	4
	Gates & Fencing	Fencing in good condition but the receiving area gate is grinding on the ground.	4
	Irrigation System	Water drainage issues around exterior door 3. Earth erosion at downspout locations.	2
	Landscaping		5
	Maintenance (Dock, Trash, Util.)	Trash enclosure in good condition. Loading dock is non-functional. District plans to remove in 2018.	3
	Pedestrian Access		4
	Playground Equipment	Soft surface playground equipment is worn and typical for age. Basketball hoops and hard surface playground are in poor condition. District plans to patch and regrade asphalt at basketball hoop hard surface in 2018.	2
	Sidewalks & Pavement	Asphalt in poorer condition than concrete walkways. Further Reference 2016 Pavement Maintenance and Replacement Study Report by JSD Professional Services and CGC, Inc. included in Appendix.	2
	Site Amenities (Furniture, etc.)	Typical for age.	3
	Site Signage		4

			Sandhill Elementary
Electrical	Arc Flash Study	- No arc flash labels were observed; complete arc flash study on all distribution equipment in building and install detailed labels.	1
	CCTV	- Intermediate camera coverage. IP cameras noted interior at Main Entry and exterior at Receiving and a number of other exterior doors. - New cameras are scheduled for installation during 2018 - 2019 year.	5
	Communications Systems	-CareHawk CH1000 intercom headend installed 2012. Interfaced with phone system and Singlewire emergency notification software.-Classroom speakers replaced in 2012 when headend was replaced; reused existing baffles. All other speakers original to 1997 construction.-American Time SSQMSTR Ethernet controlled master clock / transmitter and battery-operated analog wireless clocks installed 2012.	5
	Data	- All existing cabling is terminated in one telecommunications room within IMC. - All Cat5 cabling is scheduled to be replaced with Cat6A cabling Summer 2018. - Wireless access points are installed throughout building.	5
	Distribution Panelboards	-Cutler-Hammer branch circuit panels original to 1997 (qty 10) construction; replacement not recommended for 8-10 years.	5
	Fire Alarm System	-Simplex 4100ES control panel recently installed, however, notification and initiation devices original to 1997 construction. -The system is operational and is tested annually.-Expected life for any fire alarm system is < 25 years due to changes in Code and technology which affects serviceability. -Recent Code change requires a voice-annunciated system which can be used for all emergencies in lieu of tones for new/upgraded systems.	2
	Generator System	-No generator. At District discretion, consider adding to support data network with a longer back-up power runtime than local UPS provides as more systems are converted to IP-systems (i.e. security cameras, emergency communication, access control, etc.).	3

Category	Topic	Comment	Sandhill Elementary
Electrical	Intrusion Alarm	- Maxsys alarm system with motion sensors in Classroom Wing Corridors, IMC, Main Entry, Gym/Receiving Area, Cafeteria West Entry, and Cafeteria East Entry with keypads at Receiving and Main Entry. - Replacement recommended if integration with Keyless Entry and/or Security Camera System is desired as existing system cannot be integrated.	2
	Keyless Entry	- Andover, conventional (non - IP) system is functional and meets current needs. Approximately 5 exterior doors are controlled. - AIPHONE JK - DA entry intercom installed at Main Entry vestibule to provide communication with JK - 1MED monitor in main office.	5
	Lighting	-Majority of interior lighting fixtures utilize 4' T8 fluorescent lamps with electronic ballasts. Handful of areas with compact fluorescent. -Other than Gymnasium, fixtures appears to be original to 1997 construction.-Consider replacing fluorescent fixtures with LED type fixtures. District has assembled a detailed lighting study.-Emergency egress lighting and exit lights provided with battery-powered equipment; egress lighting batteries integral to normal lighting.-No exterior emergency egress lighting was noted immediately outside of exit doors.	3
	Lighting Control	-Majority of interior lighting controlled with occupancy sensors and/or dual-level switching. -If spaces are renovated or new light fixtures are provided; replace existing dual-level switching with dimmer switches.	5
	Low Voltage Switchgear & Distribution	-Cutler-Hammer service distribution panel with external surge protection device original to 1997 construction. -Minimal breaker mounting space available; may require replacement to accommodate additional loads.-Biannual testing and cleaning of main service disconnect is completed ensuring proper operation.	5
	Power Devices	-Majority of areas appear to be adequate. Staff indicated specialty areas are deficient in quantity of outlets. Add at District discretion.	4

Category	Topic	Comment	Sandhill Elementary
Electrical	Power Devices	-Majority of areas appear to be adequate. Staff indicated specialty areas are deficient in quantity of outlets. Add at District discretion.	4
	Site Lighting	-Exterior pole mounted and building mounted lighting has been upgraded to LED type fixtures.-Exterior lighting controlled via photocell and timeclock schedules.	5
	Site Utilities (transformers, etc.)	-1,000-amp 277/480-volt 3-phase 4-wire service original to 1997 construction; no known issues. Peak demand 195.8kW = 295-amps-Biannual testing and cleaning of main service disconnect is completed; ensuring proper operation.	5

			Sandhill Elementary
Exterior Enclosure	Exterior Cladding	Efflorescence on masonry, some damage to precast sills and minor damage to EFIS.	3
	Exterior Doors	Typical for age.	3
	Exterior Sealants	Sealant deterioration at many locations and some areas missing sealant.	2
	Louvers & Vents	Typical for age with some damage and corrosion.	3
	Windows, Storefronts & Curtainwalls	Newer storefront windows in Library are in good condition.	4
	Wood Windows	Windows leak air/water and are rotting. Window screens are worn and damaged. District is replacing the most critical wood windows year-by-year.	1
Foundation	Dampproofing & Waterproofing	No evidence of issues were observed.	4
	Foundation & Frost Walls		4
	Slab on Grade		4
Interior	Casework & Millwork	Casework shows typical wear for age, and some locations of chipping and delaminating.	3
	Ceiling Finish	Ceiling tiles are sagging, as is typical over time. Some stained and damaged tiles and some grids corroding.	2
	Coiling Shutters & Grilles		4
	Floor Finish		4
	Gym/Sports Flooring	Gym flooring is scratched and worn in several places.	3
	Interior Doors, Frames & Hardware	Minor damages to doors and frame.	3
	Stairs & Handrails	Stair and handrails are worn but typical for age. Guardrail height and baluster spacing not compliant with current code.	3
	Wall Finish Condition	Minor wear and tear to paint surface and drywall surfaces.	4
	Window Treatments		4

Category	Topic	Comment	Sandhill Elementary
Mechanical	Air Handlers	Typical condition for 20 year old air handling units. With good maintenance should last another 15 years.	3
	Air Terminals (VAV, FPVAV)		3
	Boilers	Flexible tube style boilers in good condition. Efficiencies not as high as current boiler technology.	3
	Chillers & Cooling	Only one AHU provides AC. Consideration should be given to air conditioning the entire building for proper humidity and environmental control.	2
	Controls	DDC controls are in good condition. Updating some of the constant volume air handlers to VAV with VFD's would improve energy efficiency	4
	Ducts & Distribution		4
	Exhaust Fans		3
	Piping/Insulation		4
	Pumps		3
	Unit Heaters		3
	Wall Fin Radiation		3
Miscellaneous	Bleachers	Bleachers are worn but typical for age.	3
	Classroom Equipment (Hoods, ..		4
	Elevator	Finishes are worn.	3
	Food Service Equipment	Typical for age.	3
	Lockers		4
	Stage Curtains	Movable stage wall has minor damage and staining. Typical for age.	3
	Toilet Accessories		4
	Toilet Partitions	With the exception of the locker rooms, all partition look to be in like new condition.	4

Category	Topic	Comment	Sandhill Elementary
Plumbing	Fixtures (sinks, toilets, urinals, etc.)	Restroom (Multiple-use): Toilets - wall mounted with sensor flush valves; Lavatories - wall mounted with sensor faucets; Urinal - floor mounted with sensor flush valves.Restroom (Single-use): Toilets - floor mounted with tanks; Lavatories - wall mounted with manual faucets.Restroom (Locker Room): Toilets - wall mounted with sensor flush valves; Lavatories - wall mounted with metering faucets; Urinal - floor mounted with sensor flush valves; Shower - 5 - head shower pole and ADA singles.Restroom (Locker Room- Single use): Toilets - floor mounted with tanks; Lavatories - wall mounted with manual faucets; Shower - ADA.Electric Water Coolers: in compliance per ADA standards and some with bottle filling stationsClassroom: Stainless steel drop-in sinks with goose neck spout faucets.Art: Stainless steel drop-in sinks with goose neck spout faucets with solid interceptors.Science: Integral resin sinks with goose neck spout faucets that flow to acid basin. Eye wash station and Gas turrets.Kitchen: Sinks, drains and faucets operate well. Cast iron drain serves the dish machine.Mop Sink & Eye Wash Station:Hose Bibbs: Frost proof	3
	Grease Interceptor	Grease Interceptor: Schier 40 gpm - over 15 yrs old. Solid Interceptor: Zurn 2 gpm - over 15 yrs old - Some are not in compliance per Wisconsin clear space requirement for service accessibility.Acid Basin: (2)100 gallons serving to areas.	3
	Piping & Distribution	Water: Copper pipes and fittingsDrain, Waste and Vent: Cast Iron drain and waste, Galvanized vents. Repaired sections are with PVC.Storm: Cast iron and PVC.	3

Category	Topic	Comment	Sandhill Elementary
Plumbing	Pumps & Valves	Water Distribution System: Ball valves on main piping; Ball valves on branch piping.Hot Water Circulation: Over two minutes to get hot water at most remote distance from water heater. Rebalance system.Backflow Preventer: Watt RPZ - to serve mechanical system's hot water heating boilers.	3
	Utilities	Water: 4" water service with 3" main water meter and 2" bypass water meter. Water is supplied by the local municipal water system. Current water service is not capable of to support an automatic fire sprinklers system. If an automatic fire sprinklers system is required for any building addition or remodeling, a min 6" water service will be required per flow test report and calculations.Fire Sprinklers: NoneSanitary: Sanitary is supplied by the local municipal sewer system.Storm: Interior piping system and down spouts that discharge to grade.	3
	Water Heaters	Water Heater: AO Smith BTH-250 100 gallon with 1,000 gallon storage tank (not used) - 120 degree (General Areas) piping and valve installed for second heater with circulating pump.Water Heater: AO Smith ProMax 60 gallon - 140 degree (Kitchen Only) with circulating pump.Water Softener:(2) Hellenbrand 150 gpm-provides soft water for the cold and hot water distribution system.Sanitary Ejector: Duplex pumps with Alarm, no battery back-up. Serves lower level.	3

Category	Topic	Comment	Sandhill Elementary
Roofing	Drains, Gutters & Downspouts	Typical for age.	4
	Ponding Water		5
	Roofing Membrane	Ballast underlayment is worn in several locations due to wind and weather. Further Reference 2014 Roofing Report by Apex Building Consultants included in Appendix.	4
	Skylights & Hatches	Access to roof is difficult through mechanical penthouse door.	4
Structural System	Structural Framing		4

RIVER BLUFF MIDDLE SCHOOL

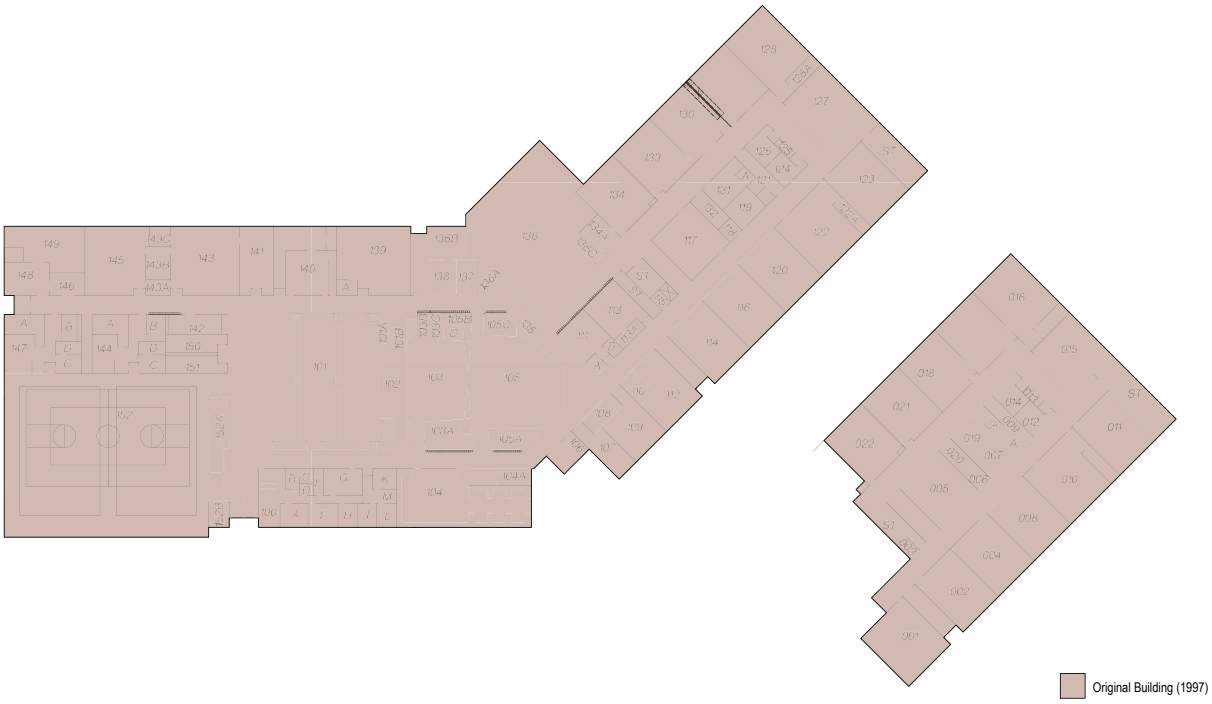
Condition Assessment

See APPENDIX for detailed information.

Year Built: 1997
Site Size: 12 acres
Building Size: 96,164 sq. ft.
Current Enrollment (Sept. 2017): 668
Grade Levels: 6-8

GENERAL COMMENTS ON RIVER BLUFF MIDDLE SCHOOL

- Site asphalt surfaces are in poor condition.
- Amenities with a level of accessibilty typical for time of construction are provided.
- Exterior masonry and EIFS systems starting to show some wear. Most sealant is deteriorated.
- Wood windows are in poor condition.
- Interior finishes are in fair condition, most show some wear & tear from use.
- Overall the building is well ventilated by the mechanical system.
- The majority of electrical systems are in good working condition and do not require attention. Adding general convenience receptacles would improve functionality of some specialty spaces.
- The overall plumbing system, fixtures and equipment are in fair condition from normal use.



RIVER BLUFF - MIDDLE SCHOOL

Historic Plans

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Category	Topic	Comment	River Bluff Middle School
ADA	Accessible Entry(s)	Asphalt has settled lower than adjacent entry stoops at a majority of the exterior doors.	3
	Accessible Parking		5
	Accessible Restrooms	Most restroom amenities are accessible. Fixture clearances at a few locations do not meet current ADA requirements.	4
	Accessible Route	Accessibility amenities typical for age. Some items do not meet current ADA requirements.	4
	Exterior Stairs, Ramps & Rails	Guardrail at stone retaining wall has large between rails.	3
	Passenger Loading Zone	No marked loading zone, and no curb cuts at drop-off area.	3
Civil / Site	Gates & Fencing	Damage in one spot, no major issues elsewhere.	4
	Irrigation System	Erosion at downspout splash blocks, creating spots where ponding appears to occur. This prohibits water drainage away from the building.	2
	Landscaping	One area in back of building where grade is above wall base weep vents.	3
	Maintenance (Dock, Trash, Util.)	Trash enclosure gates no longer operate properly due to damage.	2
	Pedestrian Access	Potential for ice build up from downspout near north exterior door.	4
	Playground Equipment	Most basketball hoops aged, asphalt play surfaces deteriorating.	2
	Sidewalks & Pavement	Asphalt in poorer condition than sidewalks, with numerous cracks. Further Reference 2016 Pavement Maintenance and Replacement Study Report by JSD Professional Services and CGC, Inc. included in Appendix.	2
	Site Amenities (Furniture, etc.)	Typical for age.	3
	Site Signage		4

Category	Topic	Comment	River Bluff Middle School
Electrical	Arc Flash Study	- No arc flash labels were observed; complete arc flash study on all distribution equipment in building and install detailed labels.	1
	CCTV	- Intermediate camera coverage. IP cameras noted interior at Main Entry and exterior at Receiving and a number of other exterior doors. - New cameras are scheduled for installation during 2018 - 2019 year.	5
	Communications Systems	-CareHawk CH1000 intercom headend installed 2012. Interfaced with phone system and Singlewire emergency notification software.-Classroom speakers replaced in 2012 when headend was replaced; reused existing baffles. All other speakers original to 1997 construction.-American Time SSQMSTR Ethernet controlled master clock / transmitter and battery-operated analog wireless clocks installed 2012.	5
	Data	- All existing cabling is terminated in one telecommunications room within IMC. - All Cat5 cabling is scheduled to be replaced with Cat6A cabling Summer 2018. - Wireless access points are installed throughout building.	5
	Distribution Panelboards	-Cutler-Hammer branch circuit panels original to 1997 (qty 10) construction; replacement not recommended for 8-10 years.	5
	Fire Alarm System	-Simplex 4100U control panel installed since the original 1997 construction; but prior to 2010. However, notification and initiation devices original to 1997 construction. -The system is operational and is tested annually.-Expected life for any fire alarm system is < 25 years due to changes in Code and technology which affects serviceability. -Recent Code change requires a voice-annunciated system which can be used for all emergencies in lieu of tones for new/upgraded systems.	2
	Generator System	-No generator. At District discretion, consider adding to support data network with a longer back-up power runtime than local UPS provides as more systems are converted to IP-systems (i.e. security cameras, emergency communication, access control, etc.).	3

Category	Topic	Comment	River Bluff Middle School
Electrical	Intrusion Alarm	- Maxsys alarm system with motion sensors in Classroom Wing Corridors, IMC, Main Entry Area, and Gym/Receiving Area with keypads at Receiving and Main Entry. - Replacement recommended if integration with Keyless Entry and/or Security Camera System is desired as existing system cannot be integrated.	2
	Keyless Entry	- Andover, conventional (non - IP) system is functional and meets current needs. Approximately 4 exterior doors are controlled. - AIPHONE JK - DA entry intercom installed at Main Entry vestibule to provide communication with JK - 1MED monitor in main office.	5
	Lighting	-Majority of interior lighting fixtures utilize 4' T8 fluorescent lamps with electronic ballasts. Handful of areas with compact fluorescent. -Other than Gymnasium, fixtures appears to be original to 1997 construction.-Consider replacing fluorescent fixtures with LED type fixtures. District has assembled a detailed lighting study.-Emergency egress lighting and exit lights provided with battery-powered equipment; egress lighting batteries integral to normal lighting.-No exterior emergency egress lighting was noted immediately outside of exit doors.	3
	Lighting Control	-Majority of interior lighting controlled with occupancy sensors and/or dual-level switching. -If spaces are renovated or new light fixtures are provided; replace existing dual-level switching with dimmer switches.	5
	Low Voltage Switchgear & Distribution	-Cutler-Hammer service distribution panel with external surge protection device original to 1997 construction. -Minimal breaker mounting space available; may require replacement to accommodate additional loads.-Biannual testing and cleaning of main service disconnect is completed ensuring proper operation.	5

Category	Topic	Comment	River Bluff Middle School
Electrical	Power Devices	-Majority of areas appear to be adequate. Staff indicated specialty areas are deficient in quantity of outlets. Add at District discretion.	4
	Site Lighting	-Exterior pole mounted and building mounted lighting has been upgraded to LED type fixtures.-Exterior lighting controlled via photocell and timeclock schedules.	5
	Site Utilities (transformers, etc.)	-1,000-amp 277/480-volt 3-phase 4-wire service original to 1997 construction; no known issues. Peak demand 153.2kW = 231-amps	5

Category	Topic	Comment	River Bluff Middle School
Exterior Enclosure	Exterior Cladding	Some efflorescence and staining on brick. Minor cracks in EIFS at various locations.	3
	Exterior Doors	Typical wear for age.	3
	Exterior Sealants	Sealant deteriorating at many locations.	2
	Louvers & Vents	Some exhaust vents corroding.	3
	Windows, Storefronts & Curtainwalls		4
	Wood Windows	Original windows leak air/water and are rotting. District is replacing the most critical wood windows year-by-year.	1
Foundation	Dampproofing & Waterproofing	No evidence of issues were observed.	4
	Foundation & Frost Walls		4
	Slab on Grade		4
Interior	Casework & Millwork	Casework shows typical wear for age, and some locations of chipping and delaminating.	3
	Ceiling Finish	Ceiling tiles sagging similarly throughout, as is typical over time. Grid in some toilet rooms corroded significantly.	2
	Coiling Shutters & Grilles		4
	Floor Finish	Flooring in a number of areas appears to be newer.	4
	Gym/Sports Flooring		3
	Interior Doors, Frames & Hardware	A number of doors have some minor damage.	3
	Stairs & Handrails	Stair guardrail height and spacing of posts not compliant with current code.	3
	Wall Finish Condition	Minor wear and tear to paint surface and drywall wall surfaces.	4
	Window Treatments	Window blinds damaged in a number of rooms.	3

Category	Topic	Comment	River Bluff Middle School
Mechanical	Air Handlers	Typical condition for 20 year old air handling units. With good maintenance should last another 15 years.	3
	Air Terminals (VAV, FPVAV)		3
	Boilers	Flexible tube style boilers in good condition. Efficiencies not as high as current boiler technology.	3
	Chillers & Cooling	Only one air handling unit, AHU-4, currently served by an outdoor condensing unit to provide AC. Consideration should be given to air conditioning the entire building to provide proper humidity and environmental control.	2
	Controls	DDC controls are in good condition. Updating some of the constant volume air handlers to VAV with VFD's would improve energy efficiency	4
	Ducts & Distribution		4
	Exhaust Fans		3
	Piping/Insulation		4
	Pumps		3
	Unit Heaters		3
	Wall Fin Radiation		3

Category	Topic	Comment	River Bluff Middle School
Miscellaneous	Bleachers	Typical wear for age.	3
	Classroom Equipment (Hoods, Kilns, etc.)	FACE appliances older, but appear to be in good working condition.	3
	Elevator		4
	Food Service Equipment	Wear and tear, and some damage to various items.	3
	Lockers	Locker room lockers starting to corrode, aided by humidity. A few locations where corridor lockers are damaged.	3
	Stage Curtains	Operable folding partition at stage appears to be in good condition.	4
	Toilet Accessories		4
	Toilet Partitions	With the exception of the locker rooms, all partitions appear to have been recently replaced.	4
	Toilet Room Other	Cabinet heater housing corroding, and ceiling grid severely corroded in one of the toilet rooms.	3

Category	Topic	Comment	River Bluff Middle School
Plumbing	Fixtures (sinks, toilets, urinals, etc.)	Restroom (Multiple-use): Toilets - wall mounted with sensor flush valves; Lavatories - wall mounted with sensor faucets; Urinal - floor mounted with sensor flush valves.Restroom (Single-use): Toilets - floor mounted with tanks; Lavatories - wall mounted with manual faucets.Restroom (Locker Room): Toilets - wall mounted with sensor flush valves; Lavatories - wall mounted with metering faucets; Urinal - floor mounted with sensor flush valves; Shower - 5 - head shower pole and ADA singles.Restroom (Locker Room- Single use): Toilets - floor mounted with tanks; Lavatories - wall mounted with manual faucets; Shower - ADA.Electric Water Coolers: in compliance per ADA standards and some with bottle filling stationsClassroom: Stainless steel drop-in sinks with goose neck spout faucets.Art: Stainless steel drop-in sinks with goose neck spout faucets with solid interceptors.Science: Integral resin sinks with goose neck spout faucets that flow to acid basin. Eye wash station and Gas turrets.Kitchen: Sinks, drains and faucets operate well. Cast iron drain serves the dish machine.Mop Sink & Eye Wash Station:Hose Bibbs: Frost proof	3
	Grease Interceptor	Grease Interceptor: Schier 40 gpm - over 15 yrs oldSolid Interceptor: Zurn 2 gpm - over 15 yrs old - Some are not in compliance per Wisconsin clear space requirement for service accessibility.Acid Basin: (2)100 gallons serving to areas.	3
	Piping & Distribution	Water: Copper pipes and fittingsDrain, Waste and Vent: Cast Iron drain and waste, Galvanized vents. Repaired sections are with PVC.Storm: Cast iron and PVC.	3

Category	Topic	Comment	River Bluff Middle School
Plumbing	Pumps & Valves	Water Distribution System: Ball valves on main piping; Ball valves on branch piping.Hot Water Circulation: Over two minutes to get hot water at most remote distance from water heater. Rebalance system.Backflow Preventer: Watt RPZ - to serve mechanical system's hot water heating boilers.	3
	Utilities	Water: 4" water service with 3" main water meter and 2" bypass water meter. Water is supplied by the local municipal water system. Current water service is not capable of to support an automatic fire sprinklers system. If an automatic fire sprinklers system is required for any building addition or remodeling, a min 6" water service will be required per flow test report and calculations.Fire Sprinklers: NoneSanitary: Sanitary is supplied by the local municipal sewer system.Storm: Interior piping system and down spouts that discharge to grade.	3
	Water Heaters	Water Heater: AO Smith BTH-250 100 gallon with 1,000 gallon storage tank (not used) - 120 degree (General Areas) piping and valve installed for second heater with circulating pump.Water Heater: AO Smith ProMax 60 gallon - 140 degree (Kitchen Only) with circulating pump.Water Softener:(2) Hellenbrand 150 gpm-provides soft water for the cold and hot water distribution system.Sanitary Ejector: Duplex pumps with Alarm, no battery back-up. Serves lower level.	3

Category	Topic	Comment	River Bluff Middle School
Roofing	Drains, Gutters & Downspouts	Typical for age.	4
	Ponding Water		5
	Roofing Membrane	Ballast underlayment is worn in several locations due to wind and weather. Ballast has washed away to expose membrane in a few locations. Further Reference 2014 Roofing Report by Apex Building Consultants included in Appendix.	4
	Skylights & Hatches	Access to roof is difficult through mechanical penthouse door.	4
Structural System	Structural Framing		4

STOUGHTON HIGH SCHOOL

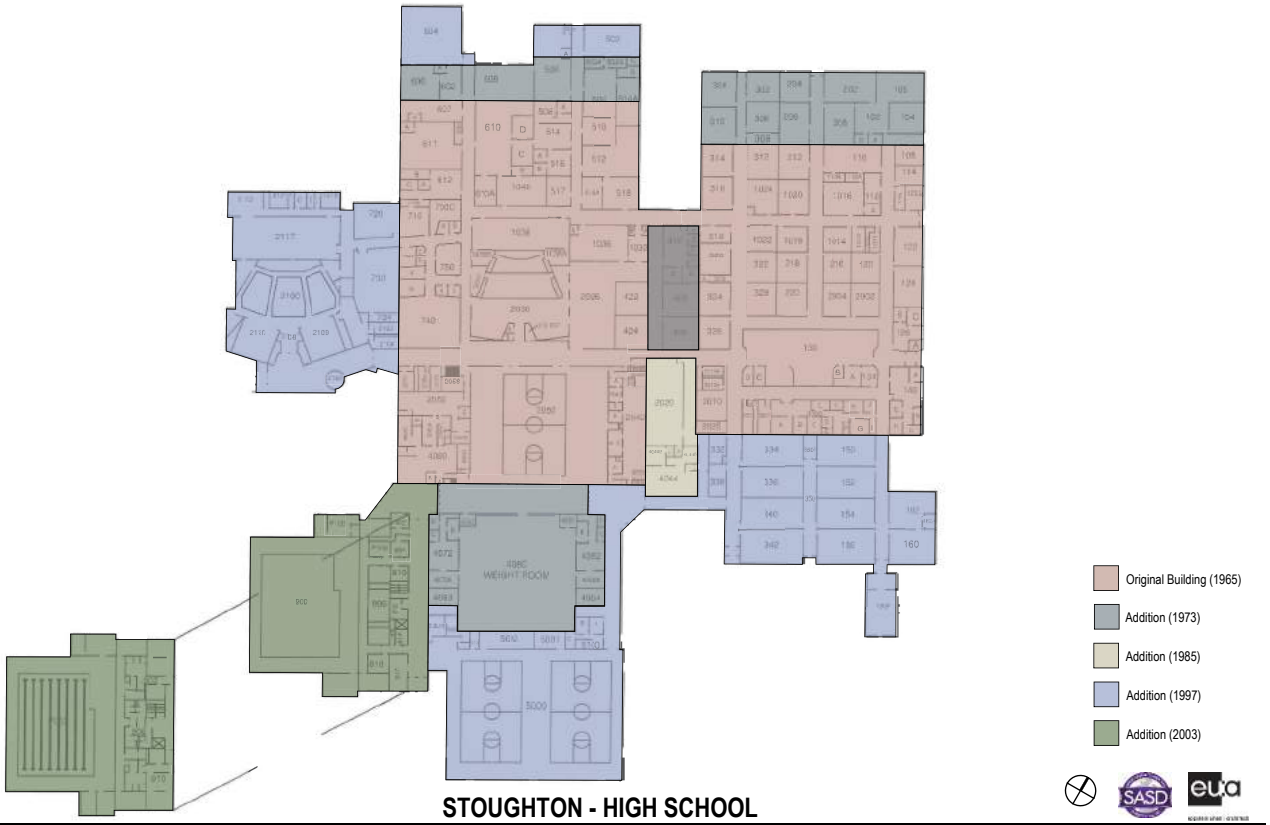
Condition Assessment

See APPENDIX for detailed information.

Year Built: 1965 (additions/renovations in 1974, 1987, 1997, 2004)
Site Size: 50 acres
Building Size: 261,221 sq. ft.
Current Enrollment (Sept. 2017): 949
Grade Levels: 9-12

GENERAL COMMENTS ON HIGH SCHOOL

- Some areas on the north side of the site where wheelchair access becomes difficult. No elevator access to the mezzanine level of the gym.
- Mix of newer windows in good condition, and older single pane or wood windows in poor condition.
- Many interior finishes in fair to good condition. Finishes at a few areas are in poor condition, such as the cafetorium flooring, fieldhouse roof deck paint, and some of the older casework.
- Press box is aged and in poor condition.
- The main hot water heating and chilled water cooling systems are in good condition. Most of the air handling systems have been updated and provide proper ventilation.
- A number of electrical systems need attention. The switchboards and branch circuit panels original to 1965, 1974, and 1987 construction should be replaced.
- The overall plumbing system, fixtures and equipment are in fair condition from normal use.



STOUGHTON - HIGH SCHOOL

Historic Plans

Category	Topic	Comment	Senior High School
ADA	Accessible Entry(s)	Some differential settlement between exterior door stoop and adjacent asphalt at some locations.	4
	Accessible Parking		5
	Accessible Restrooms	A couple instances of restrooms not meeting current ADA requirements. Most of these instances are the size of clearances around fixtures not fully meeting the current code requirements.	4
	Accessible Route	No elevator access to mezzanine level of gym. Ramps to football field and arboretum too steep to be fully accessible. A few instances of elements like doors and drinking fountains that do not meet current ADA requirements.	3
	Exterior Stairs, Ramps & Rails	Ramps and rails to football field do not meet current ADA requirements.	3
	Passenger Loading Zone		4
Civil / Site	Athletic Field Support Spaces	Press box is in poor condition. Interior finishes are deteriorated, stairs & guardrails not compliant with current code, and water ponds on the roof. Home side football bleachers are ageing and are not fully accessible.	2
	Athletic Fields	Only a few minor issues observed.	4
	Gates & Fencing	Some instances of corrosion or minor damage in a few locations.	4
	Irrigation System	Some minor ponding and erosion in a few locations.	4
	Landscaping		4
	Maintenance (Dock, Trash, Util.)		4
	Pedestrian Access	Some locations on the north of the site where wheelchair access is difficult. Ramps to some areas around the football field are steeper than current code permits.	4
	Sidewalks & Pavement	Parking lots in good condition, with minor cracking. Other asphalt and concrete curbs in worse condition with major cracking & chipping. Further Reference 2016 Pavement Maintenance and Replacement Study Report.	3
	Site Amenities (Furniture, etc.)	Range of like-new to poor amenities. Two out buildings with exteriors in poor condition.	3
	Site Signage		5

Category	Topic	Comment	Senior High School
Electrical	Arc Flash Study	- No arc flash labels were observed; complete arc flash study on all distribution equipment in building and install detailed labels.	1
	CCTV	- Intermediate camera coverage. IP cameras noted interior at Main Entry and exterior at majority of building perimeter. - Facilities staff indicated coax interior cameras are no longer operational. - New cameras are scheduled for installation during 2018 - 2019 year.	5
	Communications Systems	-CareHawk CH1000 intercom headend installed 2010. Interfaced with phone system and Singlewire emergency notification software.-Speakers were not replaced when headend was replaced and are original to the 1997 and 2004 construction. The classroom speakers from the original construction and majority of corridor speakers were replaced in 2011. -American Time SSQMSTR Ethernet controlled master clock / transmitter and battery-operated analog wireless clocks installed 2015.	5
	Data	- All existing cabling is terminated in four telecommunications rooms (Rms 2025, 102B, P110, Caf). - All Cat5 cabling is scheduled to be replaced with Cat6A cabling Summer 2018. - Wireless access points are installed throughout building.	5
	Distribution Panelboards	-Branch circuit panels original to 1965 (qty 13) construction; replacement recommended immediately.-Square D branch circuit panels original to 1974 (qty 7) construction; replacement recommended immediately.-Square D branch circuit panels original to 1987 (qty 5) construction; replacement recommended within 4-6 years.-Remaining (25) branch circuit panels original to 1997, 2001, or 2004 construction; replacement not recommended for 8-10 years.	1
	Fire Alarm System	-Simplex 4100ES control panel installed in Summer 2018, however, notification and initiation devices are original to construction and renovation. -The system is operational and is tested annually.-Expected life for any fire alarm system is < 25 years due to changes in Code and technology which affects serviceability. -Recent Code change requires a voice-annunciated system which can be used for all emergencies in lieu of tones for new/upgraded systems.	3

Category	Topic	Comment	Senior High School
Electrical	Generator System	-Caterpillar|Olympian 100kW natural gas generator located exterior to the Receiving Area installed in approximately 2004.-Operational and tested weekly.-Connected to (1) automatic transfer switch which powers both emergency loads such as egress lighting and exit lights; and non-emergency standby loads such as boilers and boiler pumps. ATS and panels installed in approximately 2001.-Code requires these (2) load types to be connected to separate transfer switches and distribution branches. Install additional transfer switch and distribution panels to separate the loads.	3
	Intrusion Alarm	- Maxsys alarm system with motion sensors in multiple Corridors, Main Entry, and Door #1 Entry with multiple keypads. - Replacement recommended if integration with Keyless Entry and/or Security Camera System is desired as existing system cannot be integrated.	2
	Keyless Entry	- Andover, conventional (non - IP) system is functional and meets current needs. Approximately 4 exterior doors are controlled. - AIPHONE JK - DA entry intercom installed at Main Entry vestibule to provide communication with JK - 1MED monitor in main office, as well as entry intercom station at Receiving Room door.	5
	Lighting	-Majority of interior lighting fixtures utilize 4' T8 fluorescent lamps with electronic ballasts. Handful of areas with compact fluorescent. -Other than Gymnasiums and Pool, fixtures appears to be original to 1974, 1987, 1997, and 2004 construction.-Gymnasiums utilize T8 fluorescent lighting and Pool utilizes LED type fixtures.-Consider replacing fluorescent fixtures with LED type. District has assembled detailed lighting study.-Emergency egress lighting and exit lights provided with fixtures connected to the emergency generator distribution.-No exterior emergency egress lighting was noted immediately outside of exit doors.	3
	Lighting Control	-Majority of interior lighting controlled with occupancy sensors and/or dual-level switching. -If spaces are renovated or new light fixtures are provided; replace existing dual-level switching with dimmer switches.	5

Category	Topic	Comment	Senior High School
Electrical	Low Voltage Switchgear & Distribution	-Square D switchboard MD3 with external surge protection and switchboard SGA is original to 1997 construction; replacement not recommended for 8-10 years. However, consider installing phase monitoring relays at Switchboard MD3 for notification of brownouts.-Square D switchboard 1974 is original to 1974 construction; replacement recommended immediately,-Square D switchboard MD1 is original to 1965 construction; replacement recommended immediately.-Square D switchboard MD2 with is original to 1965 construction; replacement recommended immediately. Consider installing phase monitoring relays for notification of brownouts.-Minimal breaker mounting space available; therefore MD3 may require replacement to accommodate additional loads.-Biannual testing and cleaning of main service disconnects is completed; ensuring proper operation.	1
	Power Devices	-In comparison to new construction, general receptacles are deficient in some instructional areas constructed in 1965, 1974, and 1987. Add at District discretion.	3
	Site Lighting	-Exterior pole mounted lighting has been upgraded to induction type fixtures.-Exterior building mounted lighting has been upgraded to LED type fixtures.-Exterior lighting controlled via photocell and timeclock schedules.	5
	Site Utilities (transformers, etc.)	-15kV primary service installed in 2002. Peak demand 918.2kW = 3,190-amps-Service feeds (2) District-Owned exterior transformers. 500kVA transformer located in north courtyard was installed in 2002 and feeds Switchboard MD2. 750kVA transformer located near northwest corner of building was installed in 1997 and feeds Switchboards MD1, SGA, and 1974 switchboard all via Switchboard MD3.-Facilities staff indicated brown-outs are experienced; consider phase monitoring on service distribution equipment. See "Low Voltage Switchgear & Distribution".-Separate service for baseball diamond on Jackson Street.	5

Category	Topic	Comment	Senior High School
Exterior Enclosure	Expansion Joints		3
	Exterior Cladding	Only some minor damages, staining, and some wear.	4
	Exterior Doors	Building has a mix of doors in good condition and doors that are worn, damaged and older.	3
	Exterior Sealants	Typical for age. Some walls above roof level in need of recaulking.	3
	Louvers & Vents	Typical for age.	3
	Windows, Storefronts & Curtainwalls	Newer storefronts are in good or like-new condition. Older aluminum windows with single pane glass are in poor condition.	4
	Wood Windows	1997 addition has wood windows, many have moisture damage.	2
Foundation	Dampproofing & Waterproofing		4
	Foundation & Frost Walls	Very minor issues.	4
	Slab on Grade	There are a couple locations where building addition slabs have shifted causing cracking in the floor finish.	3
Interior	Casework & Millwork	Mix of older and newer casework in different parts of the building. Casework in many areas very worn, and/or damaged.	2
	Ceiling Finish	Mix of like-new and older ceilings.	3
	Ceiling Other	Fieldhouse paint on roof deck is failing. Many instances of dirty ceiling tiles adjacent to ceiling diffusers.	2
	Coiling Shutters & Grilles		4
	Fire Doors & Shutters		5
	Floor Finish	Floor finish in most of this building is in good condition, some instances of poorer conditions.	4
	Flooring Other	The 1997 PAC stage floor had experienced some delamination, but is being replaced in summer 2018.	5
	Flooring Other 2	1965 original cafetorium floor is in critical condition.	1
	Gym/Sports Flooring		4
	Interior Doors, Frames & Hardware	Generally doors, frames & hardware show wear & tear typical for age. Several conditions where the door and frame are very worn or damaged.	3
	Stairs & Handrails	Stair up to the dance classroom is very worn. Pool stair handrail finish is also worn.	4
	Wall Finish Condition	Walls overall in good condition, some minor instances of scruffs & scratches on gyp bd wall finish.	4
	Window Treatments		4

Category	Topic	Comment	Senior High School
Mechanical	Air Handlers	There are air handling units serving the building of many different vintages. These units all function properly for their relative age. The oldest unit date back to the mid - 1980's. Plans should be made for the replacement of these units. There are multiple units that were replaced as a part of the 1997, 2004, 2011 construction work. An expected life span for these units is approximately 35 years.	2
		There are rooftop units serving the building of many different vintages. These units all function properly for their relative age. The oldest unit date back to the mid - 1980's. Plans should be made for the replacement of these units. There are multiple units that were replaced as a part of the 1997, 2004, 2009 construction work. An expected life span for these units is approximately 15 - 20 years.	2
	Air Terminals (VAV, FPVAV)		3
	Boilers	Main Building: (6) boilers , (5) are 14 year old modular boilers and (1) is 1 year old. Typical life expectancy is 20-23 years.	3
	Boilers 2	Pool: 14 year old DE Dietrich boilers. Typical life expectancy is 25-30 years.	3
	Chillers & Cooling	Chillers were rebuilt in 2016 and are in good condition.	4
	Ducts & Distribution	There are many ductwork systems within the building. Most are in fair condition. Replace/repair as dictated by maintenance needs or by building renovations.	3

Category	Topic	Comment	Senior High School
Mechanical	Exhaust Fans	There are many exhaust systems within the building. Most are in fair condition. Replace/repair as dictated by maintenance needs or by building renovations.	3
	Piping/Insulation	There are many piping systems within the building. Most are in fair condition. Replace/repair as dictated by maintenance needs or by building renovations.	3
	Pumps	There are many pumping systems within the building. Most are in fair condition. Replace/repair as dictated by maintenance needs or by building renovations.	3
	Unit Heaters		3

Category	Topic	Comment	Senior High School
Miscellaneous	Auditorium Seating		5
	Bleachers	Newer bleachers throughout building.	4
	Classroom Equipment (Hoods, Kilns, etc.)	Equipment generally has typical wear for age.	3
	Elevator		5
	Food Service Equipment	Legs and areas under counter on some pieces of equipment are corroding from age. Stainless steel work surfaces are generally in good condition. Delamination on the face of the serving station counter.	2
	Lockers	Corridor lockers are in like-new condition. Lockers near weight room & men's locker room adjacent to the original gym are old, worn, and damaged.	4
	Stage Curtains		4
	Theater & Stage Equipment		4
	Toilet Accessories	Pool locker room mirrors' finish damaged at mirror base. Men's locker room adjacent to original gym has old and worn accessories.	4
	Toilet Partitions	Partitions in recently renovated toilet rooms in good condition, a few instances of older partitions in other toilet rooms that are ageing.	4

Category	Topic	Comment	Senior High School
Plumbing	Fixtures (sinks, toilets, urinals, etc.)	Restroom (Multiple-use): Toilets - wall mounted with sensor flush valves; Lavatories - wall mounted with sensor faucets; Urinal - wall mounted with sensor flush valves.Restroom (Single-use): Toilets - floor mounted with tanks; Lavatories - wall mounted with manual faucets.Restroom (Locker Room): Toilets - Floor mounted with sensor flush valves; Lavatories - wall mounted with metering faucets; Urinal - floor mounted with sensor flush valves; Shower - 5 - head shower pole and ADA singles.Restroom (Locker Room- Single use): Toilets - floor mounted with tanks; Lavatories - wall mounted with manual faucets; Shower - ADA.Electric Water Coolers: in compliance per ADA standards and some with bottle filling stationsClassroom: Stainless steel drop-in sinks with goose neck spout faucets.Art: Stainless steel drop-in sinks with goose neck spout faucets with solid interceptors.Science: Integral resin sinks with goose neck spout faucets that flow to acid basin. Eye wash and shower station supplied with cold water only. Water and gas turrets at work tables.Kitchen: Sinks, drains and faucets operate well. Cast iron drain serves the dish machine, discharges to the sanitary drain and not to grease interceptor.Mop Sink: approved backflow protection to all chemical injector.Eye Wash Station: Supplied with cold water only.Hose Bibbs: Frost proof with box covers.	3
	Grease Interceptor	Grease Interceptor: Zurn 50 gpm - over 15 yrs oldSolid Interceptor: Zurn 2 gpm - over 15 yrs old - Some are not in compliance per Wisconsin clear space requirement for service accessibility.Acid Basin: Size is non-known.	3

Category	Topic	Comment	Senior High School
Plumbing	Piping & Distribution	Water: Galvanized / Copper pipes and fittingsSanitary Drain, Waste and Vent: Cast Iron drain, waste and vents. Repaired sections are with PVC.Acid Drain, Waste and Vent: Orion chemical waste pipes and fittings.Storm: Cast iron and PVC.	3
	Pumps & Valves	Water Distribution System: Ball valves on main piping; Ball valves on branch piping.Hot Water Circulation: Over two minutes to get hot water at most remote distance from water heater. Rebalance system.Backflow Preventer: Watt RPZ - to serve mechanical system's hot water heating boilers.	3
	Utilities	Water: 4" water service with (2) 2" main water meter. Water is supplied by the local municipal water system. Current water service is not capable of to support an automatic fire sprinklers system to cover the entire building. If an automatic fire sprinklers system is required for any building addition or remodeling, a min 6" water service will be required per flow test report and calculations.Fire Sprinklers: 4" fire service and riser that supplies coverage for (2) performance stages.Sanitary: Sanitary is supplied by the local municipal sewer system.Storm: Interior piping system with over flow drains and down spouts that discharge to grade.Pool: Separate water meter and sanitary services.	3
	Water Heaters	Water Heater: (1) AO Smith BTH-250 100 gallon (1) AO Smith BTH-500 100 gallon with 1,000 gallon storage tank - 120 degree (Entire Building) with circulating pump.Booster Heater at Dish machine - 140 degree.Water Softener:(2) ADDIE Water System 150 gpm- provides soft water for hot water distribution system.Sanitary Ejector: Duplex pumps with Alarm, no battery back-up. Serves the Auto Shop Area. Clear water Sump Pump: Duplex pumps with Alarm, no battery back-up. Serves the Pool addition area.Pool System Equipment: Sanitary ejector duplex pumps with alarm, no battery back-up. Clear water sump pump with Duplex pumps with alarm, no battery back-up.	3

Category	Topic	Comment	Senior High School
Roofing	Drains, Gutters & Downspouts		4
	Ponding Water	Ponding observed at one location on main entry canopy. Roofing work occurring summer of 2018 to fix this.	4
	Roofing Membrane	Mix of roof types, most in the second half of their expected lifespan. Some instances of roof leaks were reported. Further Reference 2014 Roofing Report by Apex Building Consultants included in Appendix.	3
	Skylights & Hatches		4
Structural System	Structural Framing		4

YAHARA

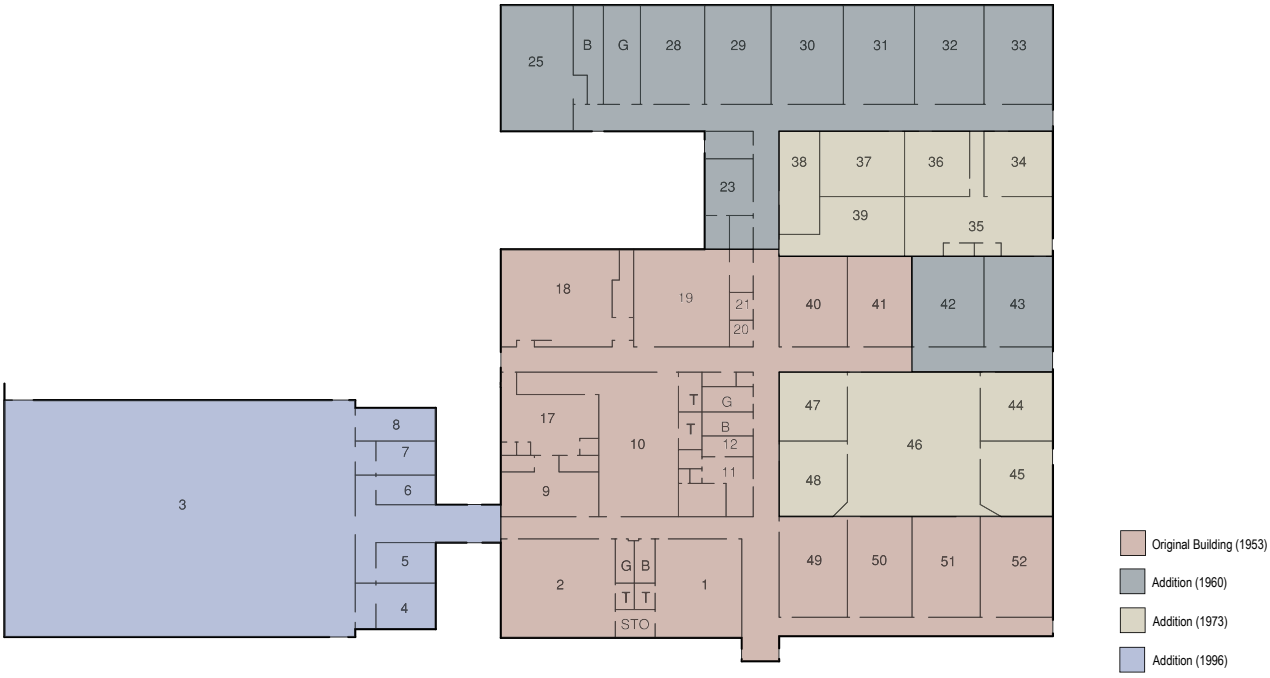
Condition Assessment

See APPENDIX for detailed information.

Year Built: 1959 (additions/renovations in 1973, 1996)
Site Size: 11 acres
Building Size: 60,710 sq. ft.

GENERAL COMMENTS ON YAHARA

- Numerous locations where sidewalk & asphalt are damaged or cracked.
- Grade drains water toward west side of gym, erosion in some locations around site.
- Most toilet rooms do not meet current ADA requirements.
- Exterior EIFS system shows signs of water damage and staining in numerous locations.
- Roofing near the end of its expected life, multiple instances of ponding water & roofing degredation.
- Majority of the interior finishes are aging and in poor condition.
- The RTU systems provide proper ventilation. The four classrooms with old unit ventilators are unventilated spaces.
- The majority of electrical systems need attention. The branch circuit panels original to 1959 and 1973 construction should be replaced.
- The overall plumbing system, fixtures and equipment are at the end of or have passed their lifecycle and require major upgrades.



YAHARA - ELEMENTARY SCHOOL

Historic Plans

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Category	Topic	Comment	Yahara Elementary
ADA	Accessible Entry(s)	Some door stoops not flush with floor slab.	4
	Accessible Parking	Striping is faded.	4
	Accessible Restrooms	Most of the toilet rooms do not meet current ADA requirements.	2
	Accessible Route	A few instances of non-accessible elements.	4
	Exterior Stairs, Ramps & Rails		5
	Passenger Loading Zone	Decent amount of loading space, curb cuts could be better located.	4
Civil / Site	Athletic Field Support Spaces		5
	Athletic Fields	Manhole & divot in center field.	4
	Gates & Fencing	Chain link site fencing is in like-new condition.	5
	Irrigation System	Hill on west side of gym drains toward building.	3
	Landscaping	Erosion in some locations.	3
	Maintenance (Dock, Trash, Util.)	Dumpster/transformer gates and enclosure are failing.	1
	Pedestrian Access		4
	Playground Equipment		5
	Sidewalks & Pavement	Numerous locations of sidewalk & asphalt damage & crack.	2
	Site Amenities (Furniture, etc.)	Outbuilding's exterior wood siding deteriorating, picnic table in need of refinishing.	3
	Site Signage		4

Category	Topic	Comment	Yahara Elementary
Electrical	Arc Flash Study	- No arc flash labels were observed; complete arc flash study on all distribution equipment in building and install detailed labels.	1
	CCTV	- Intermediate camera coverage. Interior IP cameras noted, in addition to exterior camera at Main Entry with monitor in main office. - New cameras are scheduled for installation during 2018 - 2019 year.	5
	Communications Systems	-Dukane MCS350/48 intercom headend installed 2005. Limited space for expansion. -Not interfaced with phone system; one master administration station. -Speakers were not replaced when headend was replaced and appear to be original to the 1953 construction.-Antiquated Simplex 2350 Master Time System with wired Simplex and American analog synchronized clocks.-Consider replacement of both systems.	1
	Data	- All existing Cat5 cabling is terminated in one telecommunications room. - Wireless access points are installed throughout building.	2
	Distribution Panelboards	-Square D branch circuit panel original to 1959 (qty 1) construction; replacement recommended immediately.-Square D branch circuit panels original to 1973 (qty 6) construction; replacement recommended immediately. -Square D branch circuit panels original to 1996 (qty 8) construction; replacement not recommended for 8-10 years.	3
	Fire Alarm System	-Simplex 4005 control panel appears to be original to 1996 addition and renovation, as well as, notification and initiation devices.-The system is operational and is tested annually.-Expected life for any fire alarm system is < 25 years due to changes in Code and technology which affects serviceability. -Recent Code change requires a voice-annunciated system which can be used for all emergencies in lieu of tones for new/upgraded systems.	2
	Generator System	-No generator. At District discretion, consider adding to support data network with a longer back-up power runtime than local UPS provides as more systems are converted to IP-systems (i.e. security cameras, emergency communication, access control, etc.).	3

Category	Topic	Comment	Yahara Elementary
Electrical	Intrusion Alarm	- Maxsys alarm system with motion sensors and door contacts with keypads at receiving and Main Entry. - Replacement recommended if integration with Keyless Entry and/or Security Camera System is desired as existing system cannot be integrated.	2
	Keyless Entry	- Andover, conventional (non - IP) system is functional and meets current needs. Approximately 6 exterior doors are controlled. - Remote door unlock at Main Entry from main office.	5
	Lighting	-Majority of int. lighting fixtures utilize 4' T8 fluorescent lamps with electronic ballasts. Handful of areas with compact fluorescent. -Other than Gymnasium, fixtures appears to be original to 1973 and 1996 construction.-Consider replacing fluorescent fixtures with LED. -Emergency egress lighting and exit lights provided with separate battery-powered unit equipment; upgraded since original construction.-No ext. emergency egress lighting outside of exit doors.	3
	Lighting Control	-Majority of interior lighting controlled with occupancy sensors and/or dual-level switching. -If spaces are renovated or new light fixtures are provided; replace existing dual-level switching with dimmer switches.	5
	Low Voltage Switchgear & Distribution	-Siemens service distribution panel with external surge protection device installed in 1996. Minimal breaker mounting space available; may require replacement to accommodate additional loads.-Biannual testing and cleaning of main service disconnect is completed; ensuring proper operation.	5
	Power Devices	-In comparison to new construction, general receptacles are deficient in some instructional areas constructed in 1959 and 1973. Add at District discretion.	3
	Site Lighting	-Exterior pole mounted and building mounted lighting is original HID fixtures; consider replacing to LED type.-Exterior lighting controlled via photocell and timeclock schedules.	1
	Site Utilities (transformers, etc.)	-1,200-amp 120/208-volt 3-phase 4-wire service older than 1996 main service panel; no known issues. Peak demand 108.1kW = 376-amps	5

Category	Topic	Comment	Yahara Elementary
Exterior Enclosure	Exterior Cladding	EIFS damaged and stained in numerous locations, water damage.	2
	Exterior Doors	Most doors are near end of life expectancy.	1
	Exterior Sealants	Several locations where recaulking is needed.	2
	Louvers & Vents		3
	Windows, Storefronts & Curtainwalls	Gym windows in fair condition.	3
	Wood Windows	Majority of wood windows are rotting, leaking water & air.	1
Foundation	Foundation & Frost Walls	Damage to foundation wall at gym entry from salting.	3
	Slab on Grade	Numerous conditions of differential settlement.	2
Interior	Casework & Millwork	A majority is worn or damaged, some newer casework in fair condition.	2
	Ceiling Finish	Majority of the ceiling tiles are sagging, as is typical over time. Toilet room grid rusting. Stains in a few locations.	2
	Ceiling Other	Gym ductwork paint peeled off. Ceiling diffusers & grilles and surrounding ceiling tiles dirty.	2
	Coiling Shutters & Grilles	Damage to cafeteria coiling door housing.	2
	Floor Finish	Carpet in poor condition. Damage to some VCT tiles. Evidence of past moisture issues in VCT at one location.	2
	Flooring Other	Several metal joint covers in corridors are in poor condition, could prevent a tripping hazard.	2
	Gym/Sports Flooring	District indicated wood flooring swells due to lack of climate control. Some minor water damage at exterior door thresholds.	2
	Interior Doors, Frames & Hardware	Doors and frames in poor condition. Newer, accessible hardware installed on all doors.	2
	Wall Finish Condition		3
	Window Treatments		3

Category	Topic	Comment	Yahara Elementary
Mechanical	Air Handlers	The majority of the building is served by packaged RTU's with hot water booster coils for zone control.	3
	Air Terminals (VAV, FPVAV)	Hot water booster coils in satisfactory condition.	3
	Boilers	17 year old modular boilers. Typical life expectancy is 20-23 years.	3
	Chillers & Cooling	Cooling provided by the packaged rooftop units and Mitsubishi ductless AC units.	3
	Controls	DDC control head-end looks dated. The building is in need of a complete DDC system with current technology. Pneumatic system is very dated.	3
	Ducts & Distribution		3
	Exhaust Fans		3
	Fan Coils, Unit Ventilators	Unit ventilators are non-operational except for the radiated heat from the hot water coils. No ventilation provided.	1
	Piping/Insulation		3
	Pumps		3
Miscellaneous	Bleachers	Corrosion on metal aisles.	3
	Food Service Equipment	Most of the equipment is aged. A number of residential grade appliances.	2
	Lockers	Consistent rusting & wear on all lockers.	1
	Toilet Accessories		4
	Toilet Partitions	Partitions in older portion of building are rusting and damaged.	2
	Toilet Room Other	Floor tile showing signs of wear, newer tile patched in in some locations.	3

Category	Topic	Comment	Yahara Elementary
Plumbing	Fixtures (sinks, toilets, urinals, etc.)	Restroom (Multiple-use): Toilets - wall mounted with manual flush valves; Lavatories - wall mounted with manual faucets; Urinal - floor mounted with manual flush valves and concealed tank.Electric Water Coolers: in compliance per ADA standards.Classroom: Stainless steel drop-in sinks with goose neck spout faucets.Kitchen: Sinks, drains and faucets operate ok. Cast iron drain serves the dish machine.Mop Sink & Eye Wash Station:Hose Bibbs: Frost proof	2
	Grease Interceptor	Grease Interceptor: Schier 40 gpm - over 15 yrs old	3
	Piping & Distribution	Water: Copper pipes and fittingsDrain, Waste and Vent: Cast Iron drain and waste, Galvanized vents. Repaired sections are with PVC.Storm: Cast iron.	2
	Pumps & Valves	Water Distribution System: Ball valves on gate valves main piping; Ball valves and gate valves on branch piping.Hot Water Circulation: Over three minutes to get hot water at most remote distance from water heater. Rebalance system.Backflow Preventer: Watt RPZ - to serve mechanical system's hot water heating boilers.	2
	Utilities	Water: 2" water service with 3" main water meter and 2" bypass water meter. Water is supplied by the local municipal water system. Current water service is not capable of to support an automatic fire sprinklers system. If an automatic fire sprinklers system is required for any building addition or remodeling, a min 6" water service will be required per flow test report and calculations.Fire Sprinklers: NoneSanitary: Sanitary is supplied by the local municipal sewer system.Storm: Interior piping and down spouts discharge to grade.	3
	Water Heaters	Water Heater: AO Smith Burkay mini boiler with 80 gallon storage tank - 120 degree (General Areas and Kitchen) piping and valve installed for second heater with circulating pump.Water Softener: Hellenbrand 150 gpm- provides soft water for the cold and hot water distribution system.Sanitary Ejector: Duplex pumps with Alarm, no battery back-up. Serves lower level.	3

Category	Topic	Comment	Yahara Elementary
Roofing	Drains, Gutters & Downspouts		3
	Ponding Water	Multiple instances of ponding, some large sized.	2
	Roofing Membrane	Near end of expected life. Several air pockets and cracking visible. Further Reference 2014 Roofing Report by Apex Building Consultants included in Appendix.	1
Structural System	Structural Framing	Average wear for age of building. Corrosion and paint worn off in some locations.	3

ADMINISTRATION BUILDING

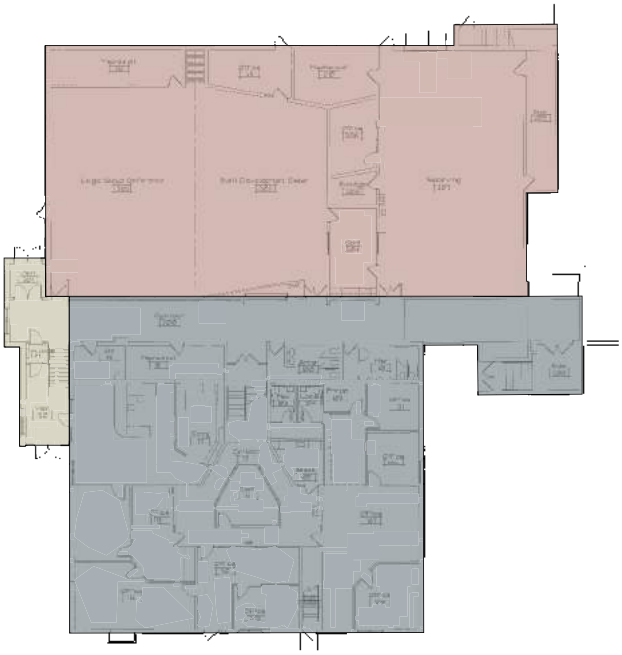
Condition Assessment

See APPENDIX for detailed information.

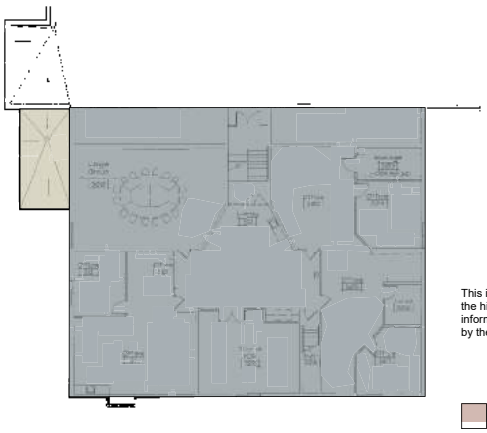
Year Built: 1979 (additions/renovations in 1984, 1997)
Site Size: 12 acres
Building Size: 14,882 sq. ft.

GENERAL COMMENTS ON ADMINISTRATION BUILDING

- Sidewalks and asphalt surfaces have some deterioration.
- No elevator access provided to the mezzanine level. Other instances where items do not meet current ADA requirements.
- Many of the interior finishes are in good condition.
- Overall the building is well ventilated by the mechanical system.
- The majority of electrical systems are in good working condition and do not require attention; however, the main distribution panel and branch circuit panels original to 1984 construction should be replaced.
- The overall plumbing system, fixtures and equipment are at the end of their lifecycle and require upgrades.



FIRST FLOOR PLAN



MEZZANINE FLOOR PLAN

This is EUA's best guess of the historic plan based on the information that was provided by the school district.

Original Building (1979)

Addition (1984)

Addition (1997)

STOUGHTON - ADMINISTRATION BUILDING

Historic Plans

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Category	Topic	Comment	Administration Building
ADA	Accessible Entry(s)		4
	Accessible Parking		5
	Accessible Restrooms	There are accessible single stall restrooms on the first floor but the main gang restrooms do not meet current ADA requirements.	2
	Accessible Route	No elevator access to the mezzanine level. There are no guardrails on a portion of the stairs near the west entry. Handrail does not continue along full length of ramp to the community building. These elements do not meet current ADA requirements.	1
	Exterior Stairs, Ramps & Rails	Guardrail on ramp does not meet current ADA requirements.	3
	Passenger Loading Zone	There is not a good loading zone that is not vehicular path.	2

Category	Topic	Comment	Administration Building
Civil / Site	Irrigation System	Some ponding and erosion.	3
	Landscaping		4
	Maintenance (Dock, Trash, Util.)		4
	Pedestrian Access	Good access. A couple walkways do not have curb cuts.	4
	Sidewalks & Pavement	Older concrete sidewalks are in fair condition with some damage. Asphalt is worn, cracking and has some pot holes and puddling.	2
	Site Amenities (Furniture, etc.)		4
	Site Signage		4

Category	Topic	Comment	Administration Building
Electrical	Arc Flash Study	- No arc flash labels were observed; complete arc flash study on all distribution equipment in building and install detailed labels.	1
	CCTV	- No cameras where observed. At District Discretion, consider adding cameras for usage of building.	3
	Communications Systems	-No intercom system; existing speakers/call stations from prior function as school are not operational.-American Time SSQMSTR cellular controlled master clock / transmitter and battery-operated analog wireless clocks installed 2011; replacement not anticipated for >10 years.	5
	Data	- All existing cabling is terminated in one telecommunications room which is also the main District network room. - Wireless access points are installed throughout building.	5
	Distribution Panelboards	-Square D branch circuit panels original to 1984 (qty 2) construction; replacement recommended immediately.-Square D branch circuit panels original to 1997 (qty 2) renovation; replacement not recommended for 8-10 years.	3
	Fire Alarm System	-Simplex 4100ES control panel recently installed. Also operates Community Building fire alarm devices.-Notification and initiation devices appear to have been installed in 1997. -The system is operational and tested annually.-Expected life for any fire alarm system is < 25 years due to changes in Code and technology which affects serviceability.	2
	Generator System	-No generator. At District discretion, consider adding to support data network with a longer back-up power runtime than local UPS provides as more systems are converted to IP-systems (i.e. security cameras, emergency communication, access control, etc.). This is especially important in this building as the main District network equipment is located here.	3
	Intrusion Alarm	- Maxsys alarm system with motion sensors in select areas with keypads at receiving and Main Entry. - Replacement recommended if integration with Keyless Entry and/or Security Camera System is desired as existing system cannot be integrated.	2

Category	Topic	Comment	Administration Building
Electrical	Keyless Entry	- Andover, conventional (non - IP) system is functional and meets current needs. Approximately 3 exterior doors are controlled. - AIPHONE entry intercom installed at Main Entry and Receiving to provide communication with monitor at Reception Desk.	5
	Lighting	-Majority of interior lighting fixtures are LED type. Handful of areas utilize 4' LED retrofit lamps in original fixtures.-Emergency egress lighting and exit lights provided with separate battery-powered unit equipment; upgraded since original construction.-No exterior emergency egress lighting was noted immediately outside of exit doors.	5
	Lighting Control	-Majority of interior lighting controlled with occupancy sensors and/or dual-level switching.	5
	Low Voltage Switchgear & Distribution	-Square D enclosed circuit breaker with external surge protection device original to 1984 construction; replacement with distribution panel recommended immediately.-No breaker mounting space for additional feeders.-Biannual testing and cleaning of main service disconnect is completed; ensuring proper operation.	1
	Power Devices	-Appear to be adequate; no known issues.	5
	Site Lighting	-Exterior pole mounted and building mounted lighting has been upgraded to LED type fixtures.-Exterior lighting controlled via photocell and timeclock schedules.	5
	Site Utilities (transformers, etc.)	-400-amp 120/240-volt 3-phase 4-wire (delta grounded B) utility service original to 1984 construction. Pole-mounted utility transformers. Peak demand 91.2kW = 275-amp.	5

Category	Topic	Comment	Administration Building
Exterior Enclosure	Exterior Cladding		4
	Exterior Doors	Mix of doors that are worn and damaged with newer doors in good condition.	3
	Exterior Sealants	Some sealant joints are worn.	3
	Louvers & Vents		4
	Windows, Storefronts & Curtainwalls	Many single pane windows. Most systems are in good condition for their age.	3
Foundation	Dampproofing & Waterproofing		4
	Foundation & Frost Walls		4
	Slab on Grade		4
Interior	Casework & Millwork		5
	Ceiling Finish	Most ceilings are like new. Some ceilings have minor issues.	4
	Floor Finish	Most floors are in good condition. Some flooring have wear and minor issues.	4
	Interior Doors, Frames & Hardware	Interior wood doors have cracks, dents, damage and finish chipping off.	3
	Stairs & Handrails		4
	Wall Finish Condition	Some minor issues.	4
	Window Treatments		4

Category	Topic	Comment	Administration Building
Mechanical	Air Handlers	Existing air handling unit serving the offices area (south side of building) are from 1984 and past the end of expected lifecycle. Existing rooftop units that serve the large spaces (north side of building) are from 2001. The units function properly, but are at end of expected lifecycle.	2
	Air Terminals (VAV, FPVAV)	Some hot water terminal units were replaced in 2001. Others are older.	3
	Chillers & Cooling	Existing condensing unit is nearing the end of their expected lifecycle.	2
	Controls	DDC control head-end looks dated. The building is in need of a complete DDC system with current technology if/when the building is renovated.	2
	Ducts & Distribution		3
	Exhaust Fans		3
	Piping/Insulation	A significant amount of new piping was installed in 2001.	4
	Pumps		3
	Unit Heaters	Some unit heaters were replaced in 2001. Others are older.	3
Miscellaneous	Elevator		4
	Toilet Accessories		4
	Toilet Partitions		3

Category	Topic	Comment	Administration Building
Plumbing	Fixtures (sinks, toilets, urinals, etc.)	Restroom (Multiple-use): Toilets - wall mounted with sensor flush valves; Lavatories - wall mounted with sensor faucets; Urinal - floor mounted with concealed flush tank; Wash Fountains - wall mounted 3 station.Restroom (Single-use): Toilets - floor mounted with sensor flush valves; Lavatories - wall mounted with sensor faucets.Electric Water Coolers: in compliance per ADA standards and some with bottle filling stationsBreakroom: Stainless steel drop-in sinks with goose neck spout faucets with sprayer.Mop Sink & Eye Wash Station:Hose Bibbs: Frost proof	3
	Piping & Distribution	Water: Galvanized and Copper pipes and fittingsDrain, Waste and Vent: Cast Iron drain and waste, Galvanized vents. Repaired sections are with PVC.Storm: Cast iron.	3
	Pumps & Valves	Water Distribution System: Ball valves and gate valves on main piping; Ball valves and gate valves on branch piping.Hot Water Circulation: Over three minutes to get hot water at most remote distance from water heater. Rebalance system.Backflow Preventer: Watt RPZ - to serve mechanical system's hot water heating boilers.	3
	Utilities	Water: 2" water service with 1.5" main water meter and without bypass. Water is supplied by the local municipal water system. Current water service is not capable of to support an automatic fire sprinklers system. If an automatic fire sprinklers system is required for any building addition or remodeling, a min 6" water service will be required per flow test report and calculations.Fire Sprinklers: NoneSanitary: Sanitary is supplied by the local municipal sewer system.Storm: Interior piping and down spouts discharge to grade.	3
	Water Heaters	Water Heater: Rheem 60gallon - 120 degree (General Areas) piping and valve installed for second heater with (2) circulating pump.Water Softener: Hellenbrand 30 gpm - provides soft water for the hot water distribution system.	3

Category	Topic	Comment	Administration Building
Roofing	Drains, Gutters & Downspouts		4
	Ponding Water	Observed at one location at the west end of roof.	4
	Roofing Membrane	Some signs of age, as roofs were installed in 1990's. Further Reference 2014 Roofing Report by Apex Building Consultants included in Appendix.	3
Structural System	Structural Framing		4

MAINTENANCE SHOP

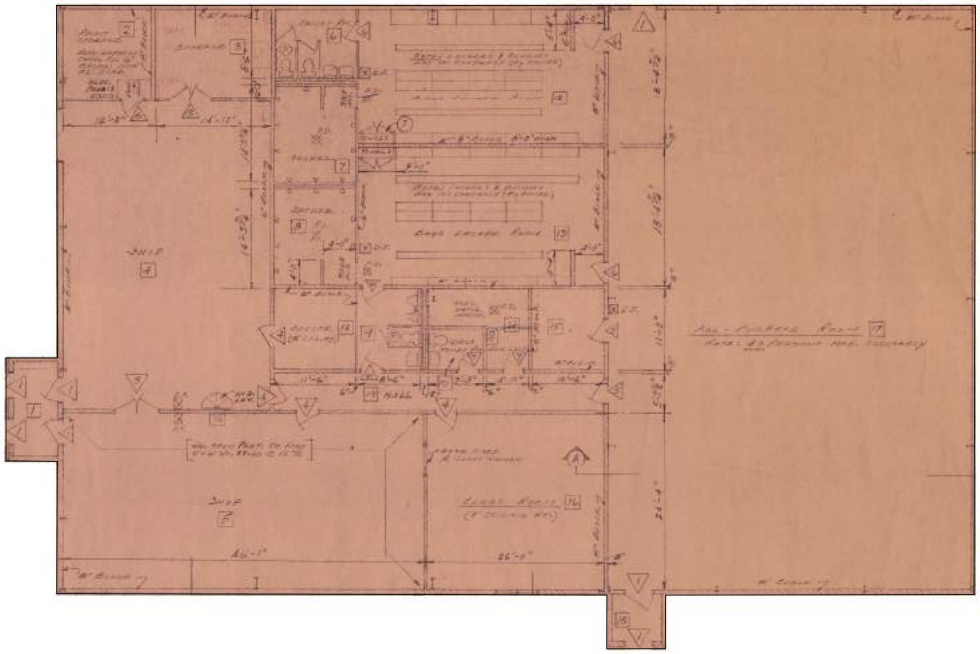
Condition Assessment

See APPENDIX for detailed information.

Year Built: 1972 (additions/renovations in 1997)
Site Size: 12 acres
Building Size: 10,508 sq. ft.

GENERAL COMMENTS ON MAINTENANCE SHOP

- Cracks and deterioration throughout aspalt parking lot, some ponding.
- Exterior metal panel, CMU walls, windows, and doors all show signs of age & some damage.
- Most of the interior finishes are old & worn.
- Mechanical equipment has exceeded or is near the end of its life expectancy.
- The majority of electrical systems are in good working condition and do not require attention; however, the main distribution panel and branch circuit panels original to 1972 construction should be replaced.
- The overall plumbing system, fixtures and equipment are at the end of or past their lifecycle and require major upgrades.



Original Building (1972)

STOUGHTON - MAINTENANCE SHOP

Historic Plans

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Category	Topic	Comment	Maintenance Shop
ADA	Accessible Entry(s)		4
	Accessible Parking	No marked accessible stalls provided.	2
	Accessible Restrooms	The restroom does not meet current ADA requirements.	1
	Accessible Route		4
Civil / Site	Gates & Fencing		5
	Irrigation System	Some erosion against building from downspout discharge. Ponding in from of and to the west of the storage garage.	3
	Landscaping		3
	Maintenance (Dock, Trash, Util.)		3
	Pedestrian Access		5
	Sidewalks & Pavement	Cracking and deterioration throughout parking lot, some ponding.	2
	Site Amenities (Furniture, etc.)	Some deterioration and damage to storage garage wood siding.	3

Category	Topic	Comment	Maintenance Shop
Electrical	Arc Flash Study	- No arc flash labels were observed; complete arc flash study on all distribution equipment in building and install detailed labels.	1
	CCTV	- No cameras. Typically not critical for this type of building, however if outdoor storage is not secured, District may elect to install.	5
	Communications Systems	-No intercom system or clock system. Both systems are not critical for use of building.	5
	Data	- All existing cabling is terminated in one telecommunications room within main Electrical Room. - Wireless access points are installed throughout building.	5
	Distribution Panelboards	-Square D branch circuit panels original to 1972 (qty 3) construction; replacement recommended immediately.	1
	Fire Alarm System	-No operational fire alarm system. Occupancy of building does not require fire alarm system.	5
	Generator System	-No generator. Standby power not critical for use of building.	5
	Intrusion Alarm	- No intrusion alarm system. Due to central storage, consider installation of new system if systems in other buildings are replaced.	1
	Keyless Entry	- Andover, conventional (non - IP) system is functional and meets current needs. Approximately 2 exterior doors are controlled.	5
	Lighting	-Variety of 4' lamps; T12,T8 fluorescent and LED retrofit lamps. -Fixtures original to 1972 const. -Consider replacing all light fixtures with LED. -Minimal emergency egress and exit lights with separate battery. -No exterior emergency egress lighting.	1
	Lighting Control	-Minimal automatic shutoff controls (i.e. occupancy sensors); consider adding in Storage and non-workshop type areas.	1
	Low Voltage Switchgear & Distribution	-Replace original Square D fusible disconnect without external surge protection device. -No breaker mounting space for additional feeders.-Biannual testing and cleaning of main service disconnect is completed; ensuring proper operation.	1
	Power Devices	-Appear to be adequate; no known issues.	5
	Site Lighting	-Minimal exterior building mounted lighting has been upgraded to LED type fixtures.-Exterior lighting controlled via photocell and timeclock schedules.	5
	Site Utilities (transformers, etc.)	-400-amp 120/208-volt 3-phase 4-wire utility service original to 1972 construction. Overhead service from pole-mounted utility transformers. Peak demand not available.	5

Category	Topic	Comment	Maintenance Shop
Exterior Enclosure	Exterior Cladding	Damage to metal panel in various locations. CMU veneer showing some deterioration & water damage.	2
	Exterior Doors	Deterioration and corrosion on a number of doors.	2
	Exterior Sealants		3
	Louvers & Vents	Rust on some of the exposed mechanicals and vents.	2
	Windows, Storefronts & Curtainwalls	Windows aged, but functional.	2
Foundation	Foundation & Frost Walls		4
	Slab on Grade		4
Interior	Casework & Millwork	Old and worn.	2
	Ceiling Finish	Most is typical for age. Some locations of damaged ceilings.	3
	Floor Finish	Most flooring is very worn.	2
	Interior Doors, Frames & Hardware	Doors and frames are worn and many are damaged.	2
	Wall Finish Condition	Very worn and some damage.	2

Category	Topic	Comment	Maintenance Shop
Mechanical	Air Handlers	Small packaged rooftop unit serves office area. Age of unit is unknown but appears to have exceeded expected life of 12-15 years. AHU/Makeup air unit in the garage is original and has exceeded its expected life of 25-30 years.	3
	Chillers & Cooling	Mini split unit located on the roof is in fair condition, but is nearing life expectancy.	3
	Controls	Standalone controls are in fair condition, as expected.	3
	Ducts & Distribution		3
	Dust Collection	Dust collector serves shop area ductwork. Unit is very old and in poor condition. It has exceeded expected life of 20-25 years.	2
	Exhaust Fans	Roof-mounted exhaust fans are in satisfactory condition.	3
	Unit Heaters	Gas fired unit heaters serve garage spaces. Appear to be in satisfactory condition.	3
Miscellaneous	Lockers	typical wear for age with some damage	3
	Toilet Accessories		3
	Toilet Partitions	Partitions are old, worn and corroding.	2

Category	Topic	Comment	Maintenance Shop
Plumbing	Fixtures (sinks, toilets, urinals, etc.)	Restroom (Multiple-use): Men's only, No showers.Breakroom: Stainless steel drop-in sinks with goose neck spout faucets. Mop Sink & Eye Wash Station:Hose Bibbs: Frost proof	2
	Piping & Distribution	Water: Copper pipes and fittings. Drain, Waste and Vent: Cast Iron drain and waste, Galvanized vents. Repaired sections are with PVC.Storm: none.	3
	Pumps & Valves	Water Distribution System: Ball valves on main piping; Ball valves on branch piping. Hot Water Circulation: Over one minutes to get hot water at most remote distance from water heater.	3
	Utilities	Water: 1.5" water service with 1" main water meter. Water is supplied by the local municipal water system. Current water service is not capable of to support an automatic fire sprinklers system. If an automatic fire sprinklers system is required for any building addition or remodeling, a min 6" water service will be required per flow test report and calculations.Fire Sprinklers: NoneSanitary: Sanitary is supplied by the local municipal sewer system.Storm: No interior piping and down spouts discharge to grade.	3
	Water Heaters	Water Heater: old residential type gas 40 gallon.Air Compression, Dryers & Filters: 20 gallon oiled operated.	2

Category	Topic	Comment	Maintenance Shop
Roofing	Drains, Gutters & Downspouts	Some damage to gutters & downspouts in various areas.	3
	Ponding Water		5
	Roofing Membrane	Some deterioration at roof vent penetrations & flashing. Further Reference 2014 Roofing Report by Apex Building Consultants included in Appendix.	3
Structural System	Structural Framing		4

COMMUNITY BUILDING

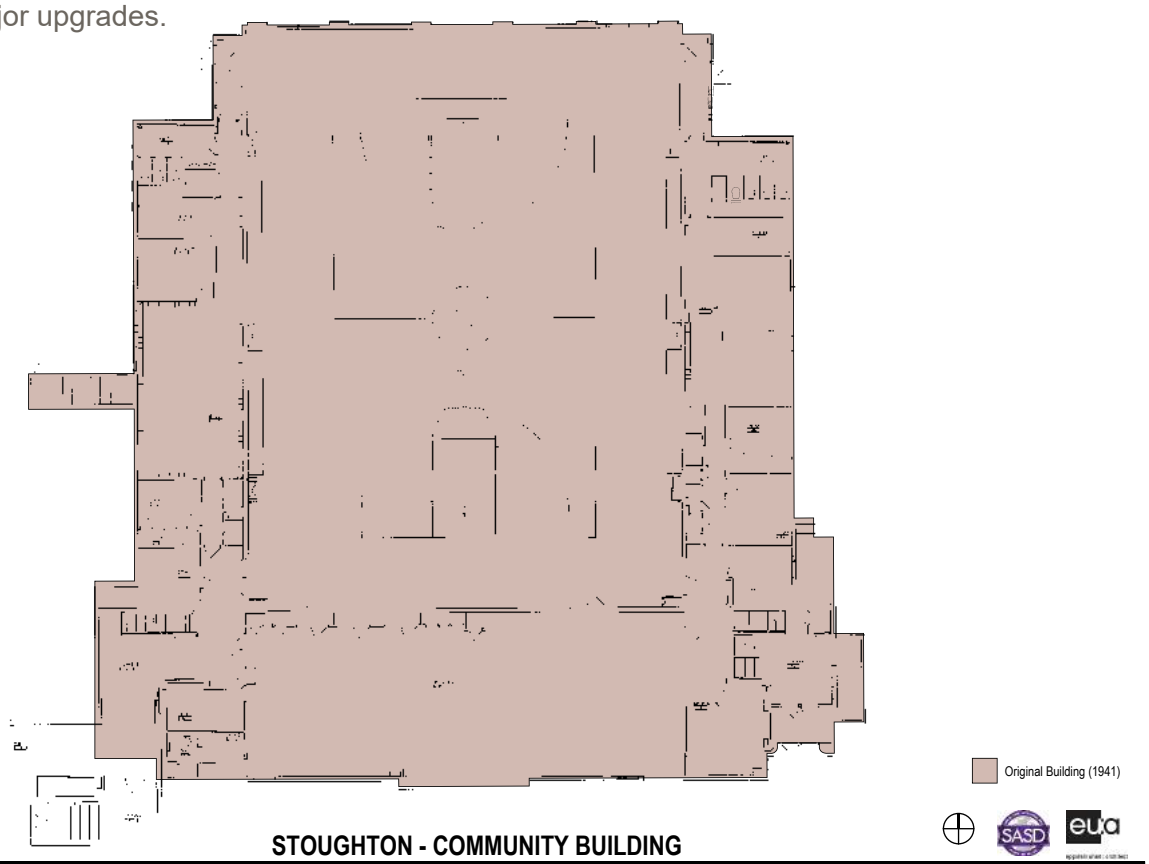
Condition Assessment

See APPENDIX for detailed information.

Year Built: 1941 (additions/renovations in 1979)
Site Size: 12 acres
Building Size: 40,698 sq. ft.

GENERAL COMMENTS ON COMMUNITY BUILDING

- No elevator access to the lower level or second floor. A number of other building elements do not meet current ADA requirements.
- Exterior cladding and windows are very worn and damaged in some locations.
- A majority of floor finishes are in poor condition, and many other interior finishes are deteriorated or damaged. Some locations in the lower level where water infiltration has occurred.
- Extensive water ponding on roof over the south portion of the building.
- Many of the mechanical systems in this building are at or past their expected lifecycle.
- The majority of electrical systems need attention. The main distribution panel and branch circuit panels original to 1979 renovation should be replaced.
- The overall plumbing system, fixtures and equipment are at the end of or past their lifecycle and require major upgrades.



STOUGHTON - COMMUNITY BUILDING

Historic Plans

Category	Topic	Comment	Community Building
ADA	Accessible Entry(s)	One on the back side and one through the admin building.	2
	Accessible Parking	No accessible parking off the rear accessible entrance. There are some accessible parking as part of the administration building that could be used.	2
	Accessible Restrooms	Toilet rooms do not meet current ADA requirements.	2
	Accessible Route	A couple of exits are not accessible. No elevator access to the lower level or 2nd floor.	1
	Exterior Stairs, Ramps & Rails	One accessible ramp and railing to the back entrance. Guardrails & handrails do not meet current ADA requirements.	3
	Passenger Loading Zone	There is not a good loading zone that is not vehicular path.	2
Civil / Site	Gates & Fencing		2
	Irrigation System		3
	Landscaping		4
	Maintenance (Dock, Trash, Util.)		4
	Pedestrian Access	Access around the building.	3
	Sidewalks & Pavement	Sidewalks are in bad condition. Asphalt for the community building is in fair condition with some cracking and ponding.	2
	Site Amenities (Furniture, etc.)	Flagpole is very old and worn.	2
	Site Signage		3

Category	Topic	Comment	Community Building
Electrical	Arc Flash Study	- No arc flash labels were observed; complete arc flash study on all distribution equipment in building and install detailed labels.	1
	CCTV	- No cameras where observed. At District discretion, consider adding cameras similar to other educational buildings in District.	3
	Communications Systems	-No intercom system; existing speakers/call stations from prior function as school are not operational. Consider adding for school use.-Administration Building master clock / transmitter operates battery-operated analog wireless clocks installed 2011; replacement not anticipated for >10 years.	1
	Data	- All existing cabling is terminated in one telecommunications room which is also the main District network room. - Wireless access points are installed throughout building.	5
	Distribution Panelboards	-Square D branch circuit panels original to 1979 (qty 14) addition and renovation; replacement recommended immediately.-Square D load center original to 2001 (qty 1) HVAC upgrade; replacement not recommended for 8-10 years.	1
	Fire Alarm System	-Administration Building control panel operates fire alarm devices in this building.-Notification and initiation devices original to 1979 construction. -The system is operational and tested annually.-Expected life for any fire alarm system is < 25 years due to changes in Code and technology which affects serviceability.-Recent Code change requires a voice-annunciated system which can be used for all emergencies in lieu of tones for new/upgraded systems if used as educational building.	1

Category	Topic	Comment	Community Building
Electrical	Generator System	-No generator. At District discretion, consider adding to support data network with a longer back-up power runtime than local UPS provides as more systems are converted to IP-systems (i.e. security cameras, emergency communication, access control, etc.).	3
	Intrusion Alarm	- Maxsys alarm system with motion sensors; connected to Administration Building control. - Replacement recommended if integration with Keyless Entry and/or Security Camera System is desired as existing system cannot be integrated.	2
	Keyless Entry	- No doors appear to have keyless entry. If door controls are desired, extend existing system at the Administration Building.	5
	Lighting	-Variety of 4' lamps observed; T12 and T8 fluorescent as well as LED retrofit lamps. -Other than the Gymnasium, fixtures appear to be original to 1979 addition and renovation. -Consider replacing all light fixtures with LED type. District has assembled a detailed lighting study.-Minimal emergency egress lighting and exit lights provided with separate battery-powered unit equipment; upgraded since original construction.-No exterior emergency egress lighting was noted immediately outside of exit doors.	1
	Lighting Control	-Minimal automatic shutoff controls (i.e. occupancy sensors); however, gymnasium did have occupancy sensor control.	1

Category	Topic	Comment	Community Building
Electrical	Power Devices	-In comparison to new construction, general receptacles are deficient in some areas. Add at District discretion.	3
	Site Lighting	-Minimal exterior building mounted lighting has been upgraded to LED type fixtures.-Exterior lighting controlled via photocell and timeclock schedules.	5
	Site Utilities (transformers, etc.)	-400-amp 120/240-volt 3-phase 4-wire (delta grounded B) utility service original to 1979 addition and renovation. Pole-mounted utility transformers. Peak demand not available.	5

Category	Topic	Comment	Community Building
Exterior Enclosure	Exterior Cladding	Cladding is very worn and damaged.	2
	Exterior Doors	Newer FRP doors are in good condition.	4
	Exterior Sealants	Sealant joints are failing.	1
	Louvers & Vents	Very worn and damaged.	2
	Windows, Storefronts & Curtainwalls	Most systems are old, worn and damaged.	2
Foundation	Dampproofing & Waterproofing	Likely some locations of water infiltration in lower level.	2
	Foundation & Frost Walls		3
	Slab on Grade		3
Interior	Casework & Millwork		3
	Ceiling Finish	Ceiling finishes are in poor condition in many areas.	2
	Floor Finish	A majority of the floor finishes are in poor condition or are failing.	1
	Gym/Sports Flooring	Typical for age.	3
	Interior Doors, Frames & Hardware	Many of the interior doors are in poor condition.	2
	Stairs & Handrails		3
	Wall Finish Condition	Many wall finishes are deteriorated or damaged.	2
	Window Treatments		3

Category	Topic	Comment	Community Building
Mechanical	Air Handlers	Existing air handling units are from 1984 and past the end of expected lifecycle.	1
	Boilers	17 year old modular boilers. Typical life expectancy is 20-23 years.	3
	Controls	DDC control head-end looks dated. The building is in need of a complete DDC system with current technology if/when the building is renovated.	2
	Ducts & Distribution	Consider replacement of ductwork when areas are remodeled.	2
	Exhaust Fans	Units function, but are past their expected life expectancy. Replacement will be required when rooms are remodeled.	2
	Fan Coils, Unit Ventilators	Unit ventilators were replaced in 2001. Many had covers removed. Renovation or replacement will be required when rooms are remodeled.	2
	Piping/Insulation	Piping appeared to be in good condition.	4
	Pumps	Pumps are same vintage as the boilers and should continue to operate with existing boilers. Renovation or replacement will be required when boiler plant is replaced.	3
	Unit Heaters	Units function, but are past their expected life expectancy. Replacement will be required when rooms are remodeled.	2
	Wall Fin Radiation	Units function, but are past their expected life expectancy. Replacement will be required when rooms are remodeled.	2
Miscellaneous	Bleachers	Bleachers showing signs of age.	2
	Lockers	Finish wearing off many of the lockers. Some lockers are damaged, others corroding. Water damage to wood base of lower level lockers.	1
	Toilet Accessories		3
	Toilet Partitions	Portions of metal partitions are severely rusted.	1
	Toilet Room Other	Many of the toilet room finishes are deteriorating.	2

Category	Topic	Comment	Community Building
Plumbing	Fixtures (sinks, toilets, urinals, etc.)	Restroom (Multiple-use): Restroom (Single-use): Restroom (Locker Room): Shower -not in use.Drinking Fountains: not in compliance per ADA standards.Mop Sink:Hose Bibbs: Frost proof	1
	Piping & Distribution	Water: Galvanized and Copper pipes and fittingsDrain, Waste and Vent: Cast Iron drain and waste, Galvanized vents. Repaired sections are with PVC.Storm: Cast iron.	3
	Pumps & Valves	Water Distribution System: Ball valves and gate valves on main piping; Ball valves and gate valves on branch piping.Hot Water Circulation: Over three minutes to get hot water at most remote distance from water heater. Rebalance system.Backflow Preventer: Watt RPZ - to serve mechanical system's hot water heating boilers.	3
	Utilities	Water: Shares with Administration Building.Fire Sprinklers: NoneSanitary: Sanitary is supplied by the local municipal sewer system.Storm: Interior piping and down spouts discharge to grade.	3
	Water Heaters	Water Heater: Shares with Administration Building.Water Softener: Shares with Administration Building.	3
Roofing	Drains, Gutters & Downspouts	Water damage at one canopy from the lack of a scupper to drain water.	3
	Ponding Water	Extensive ponding on the roof south of the gym.	1
	Roofing Membrane	Built up roofs installed in the late 1980's and 90's showing signs of age. Condition of TPO roof over gym installed in 2003 typical for age. Further Reference 2014 Roofing Report by Apex Building Consultants included in Appendix.	3
	Skylights & Hatches	Roof hatch in poor condition.	2
Structural System	Structural Framing	Repair to gym roof trusses recently done.	3

BUS GARAGE

Condition Assessment

See APPENDIX for detailed information.

Year Built: 1962 (additions/renovations in 2002, 2008)
Site Size: 2.5 acres
Building Size: 20,578 sq. ft.

GENERAL COMMENTS ON BUS GARAGE

- Some areas on site where ponding and erosion occurs.
- Garage structures generally in good condition.
- Office structure is older, with wear & tear and some instances of damage.

Original Building (1962)
Addition (2002)
Addition (2008)

STOUGHTON - BUS GARAGE

Historic Plans

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Category	Topic	Comment	Bus Garage
ADA	Accessible Entry(s)	Stoop at back exit door is not accessible.	4
	Accessible Parking	Space available for accessible stalls, but no striping provided.	2
	Accessible Restrooms	Not accessible.	1
	Accessible Route		3

Category	Topic	Comment	Bus Garage
Civil / Site	Gates & Fencing	Fence on the south side of the site is damaged & corroding.	2
	Irrigation System	Site grading at some locations around north garage appears insufficient for proper drainage. Large area of ponding west of office building. Erosion at a majority of the downspouts on the south garage, which has exposed the top portion of many of the concrete column piers and allows a path into the garage for rodents.	2
	Landscaping		3
	Maintenance (Dock, Trash, Util.)	Fuel tank fencing enclosure & bollards in good condition.	5
	Pedestrian Access		4
	Sidewalks & Pavement	Sidewalk next to original building is aged. Potholes in various locations in main gravel drive.	4
	Site Amenities (Furniture, etc.)		4

Category	Topic	Comment	Bus Garage
Exterior Enclosure	Exterior Cladding	Typical for age, damage to metal cladding in some locations.	3
	Exterior Doors	Bus garage overhead doors appear to be in good condition. Man doors showing signs of age.	3
	Exterior Sealants	Sealants deteriorating.	2
	Louvers & Vents		3
	Windows, Storefronts & Curtainwalls	Near end of expected life. Inefficient single pane windows.	2
	Wood Windows	Near end of expected life. Inefficient single pane windows.	2
Foundation	Foundation & Frost Walls	Erosion at column footings and foundation walls from downspout drainage & ponding.	2
	Slab on Grade	Some minor cracking in office slab, north garage slab in good condition. No slab in south garage - gravel floor provided.	4
Interior	Casework & Millwork	Kitchenette counter & casework in line-new condition.	4
	Ceiling Finish	A few instances of ceiling damage and potential water damage.	2
	Floor Finish	Office floors generally in good condition.	4
	Flooring Other	No concrete slab in south garage, only gravel floor.	2
	Interior Doors, Frames & Hardware	Some delaminating & chipping on wood door veneer.	2
	Wall Finish Condition		4
	Window Treatments		3
Miscellaneous	Toilet Accessories		4
Roofing	Drains, Gutters & Downspouts	Damaged or missing pieces at base of many downspouts.	2
	Roofing Membrane	Further Reference 2014 Roofing Report by Apex Building Consultants included in Appendix.	4
Structural System	Structural Framing	Corrosion typical at base of south garage columns and other framing members.	3

HISTORICAL 1892 ADMINISTRATION BUILDING

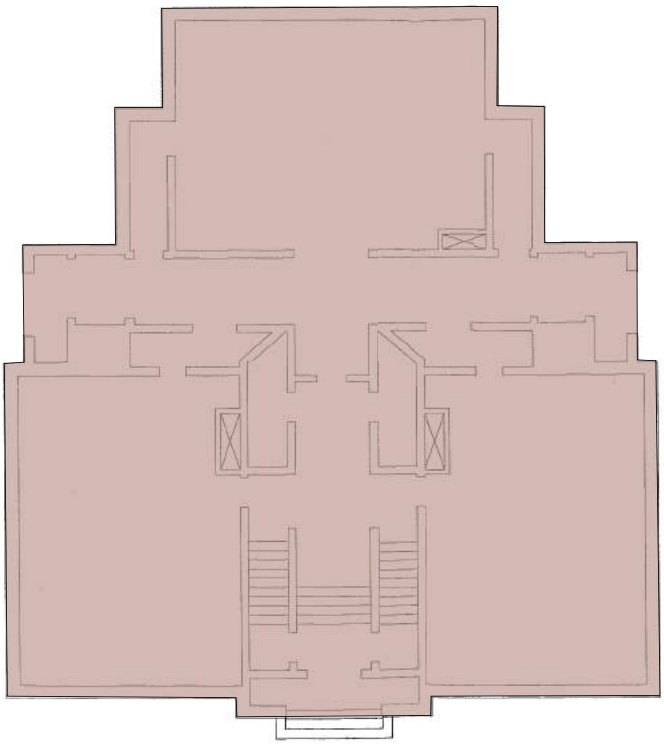
Condition Assessment

See APPENDIX for detailed information.

Year Built: 1892
Site Size: 12 acres
Building Size: 12,819 sq. ft.

GENERAL COMMENTS ON HISTORICAL 1892 ADMINISTRATION BUILDING

- Entry into building is not accessible, and no elevator access is provided to second floor.
- Toilet rooms are not accessible.
- Exterior masonry reported to be in good condition.
- A majority of interior finishes reported to be in poor condition.



Original Building (1892)

HISTORICAL 1892 ADMINISTRATIVE BUILDING

Historic Plans

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Category	Topic	Comment	1892 Historic Building
ADA	Accessible Entry(s)	Entries are not accessible	1
	Accessible Parking	No comments.	5
	Accessible Restrooms	Toilet rooms do not meet current ADA requirements.	1
	Accessible Route	Route to building is accessible; Entry into the building is not	2
	Exterior Stairs, Ramps & Rails	Exterior handrails do not meet current ADA and code requirements	1
	Passenger Loading Zone	Decent amount of loading space.	5
Civil / Site	Irrigation System	No comments.	3
	Landscaping	Minimal landscaping; a few trees and small garden bed	3
	Maintenance (Dock, Trash, Util.)	Transformer gates and enclosure are failing.	2
	Pedestrian Access	Sidewalks from district office and River Bluff Middle School	3
	Sidewalks & Pavement	School owned pavement is in good condition; adjacent city owned sidewalk in very poor condition	3
Electrical	Communications Systems	Complete replacement required to bring building up to current codes for occupancy	1
	Data	Complete replacement required to bring building up to current codes for occupancy	1
	Distribution Panelboards	Complete replacement required to bring building up to current codes for occupancy	1
	Fire Alarm System	Complete replacement required to bring building up to current codes for occupancy	1
	Lighting	Complete replacement required to bring building up to current codes for occupancy	1
	Lighting Control	Complete replacement required to bring building up to current codes for occupancy	1
	Low Voltage Switchgear & Distrib..	Complete replacement required to bring building up to current codes for occupancy	1
	Power Devices	Complete replacement required to bring building up to current codes for occupancy	1
	Site lighting	Complete replacement required to bring building up to current codes for occupancy	1

Category	Topic	Comment	1892 Historic Building
Exterior Enclosure	Exterior Cladding	Quality Building Restoration September 2017 Report identified masonry exterior to be in good condition.	3
	Exterior Doors	Most doors are near end of life expectancy and showing major wear.	1
	Exterior Sealants	Tuckpointing was completed in 2018.	4
	Louvers & Vents	Typical for age	2
	Windows, Storefronts & Curtainwalls	Aluminum windows are typical for age.	2
	Wood Windows	Majority of wood windows are rotting, leaking water & air.	1
Foundation	Foundation & Frost Walls	Water penetration	2
Interior	Casework & Millwork	Worn or damaged, typical for age.	1
	Ceiling Finish	Ceiling tiles are missing and ceiling grid is twisted and damaged in installed locations	1
	Floor Finish	Damaged, typical for age	1
	Interior Doors, Frames & Hardware	Doors and frames in poor condition. Typical for age.	1
	Stairs & Handrails	Stairs & handrails would need to be brought up to current code compliance if the building were to be occupied.	1
	Wall Finish Condition	Wood panel, word and damaged; areas in need od re-plastering or complete drywall replacement	1
	Window Treatments	Typical for age.	1
Mechanical	General Ventilation Comments	Complete replacement required to bring building up to current codes for occupancy	1
Miscellaneous	Toilet Accessories	Toilet rooms are not ADA compliant; all product would need to be replaced for occupant use	1
	Toilet Partitions	Toilet rooms are not ADA compliant; all product would need to be replaced for occupant use	1

Category	Topic	Comment	1892 Historic Building
Plumbing	Piping & Distribution	Complete replacement required to bring building up to current codes for occupancy	1
	Pumps & Valves	Complete replacement required to bring building up to current codes for occupancy	1
	Utilities	Complete replacement required to bring building up to current codes for occupancy	1
	Water Heaters	Complete replacement required to bring building up to current codes for occupancy	1
Roofing	Drains, Gutters & Downspouts		3
	Roofing Membrane	Repairs and spot replacement in 2015; asphalt shingle	3
Structural System	Structural Framing	Heritage Consultants 2017 Report identified the need for additional structural reinforcing on second floor, floor joists.	1

STOUGHTON
AREA SCHOOL DISTRICT

three:

CAPACITY + UTILIZATION

STOUGHTON AREA SCHOOL DISTRICT

SITE CAPACITY, BUILDING CAPACITY, AND UTILIZATION STUDY

This Study provides an objective analysis of present site & building capabilities, and is a critical step needed to understand how today's facilities support the goals of the District. The information presented was gathered by EUA's team of professionals through on-site tours, as well as interviews with building administrators. It serves as a foundational resource document to support the development of immediate solutions as well as long-range planning.

SITE CAPACITY ANALYSIS

The Site is generally referred to the size of the land associated to an educational facility and the improvements made on that land which include buildings, parking lots, athletic fields, etc. The size of the total land often allows or limits the amount of improvements or amenities that can be offered to a specific student population. The information below analyzes the existing site area against the recommended site area for programs of that type.
The following school site information comes from the Council of Educational Facility Planners International (CEFPI) Planning Guide (now referred to as Association for Learning Environments (A4LE)):

- Elementary School sites should be a minimum of 10 acres plus an additional acre for each 100 students.
- Middle School sites should be a minimum of 20 acres plus an additional acre for each 100 students.
- High School sites should be a minimum of 30 acres plus an additional acre for each 100 students.

There are other publications with slight variation on these general rules of thumb, but in our experience, these recommendations have provided a fairly reliable benchmark for assessing general site conditions. Of course specific conditions (e.g. need for stadium parking, on-site septic, well, etc.) may require additional area, and in tight urban sites the benchmark numbers may be unattainable.

It should also be noted that the recommended site size assumes the entire property is buildable. If the site has easements, wetlands, open water, unsuitable soils, or drastic topography that would not lend to the construction of buildings, parking, drives, or play areas the site size would have to increase based on the size of the unbuildable area.

SITE CAPACITY

SITE CAPACITY				
BUILDING	EXISTING SITE SIZE	ENROLLMENT (SEPTEMBER 2017 DPI)	RECOMMENDED SITE SIZE (BASED ON ENROLLMENT)	EXISTING BUILDING SIZE (SQUARE FEET) [d]
Fox Prairie Elementary	15.0 acres	381 students	14 acres [a]	51,000 sf
Kegonsa Elementary	13.7 acres	333 students	13 acres [a]	55,600 sf
Sandhill Elementary	19.2 acres	479 students	15 acres [a]	91,300 sf
River Bluff Middle School	12.0 acres	662 students	27 acres [b]	92,700 sf
Stoughton High School	47.3 acres	935 students	39 acres [c]	250,700 sf

a. Based on 10 acres plus one additional acre for each 100 students at Elementary School.

b. Based on 20 acres plus one additional acre for each 100 students at Middle School.

c. Based on 30 acres plus one additional acre for each 100 students at High School.

d. Based on 150 SF per student at Elementary, 180 SF per student at Intermediate, and 230 SF per student at High School.

FOX PRAIRIE ELEMENTARY SCHOOL

SITE CAPACITY ANALYSIS

Fox Prairie occupies a 15 acre site in a residential neighborhood on the southwest side of Stoughton. Suggested minimum site area for a school of this size is 14 acres, so site size is in line with general expectations. A majority of the site is flat, mowed lawn offering adequate space for physical education and outdoor activities. Storm water drainage issues on portions of the site can limit usability of green space at times. For further information regarding site function and issues with traffic flow, refer to Educational Adequacy Assessment.

KEGONSA ELEMENTARY SCHOOL

SITE CAPACITY ANALYSIS

Kegonsa Elementary serves students on the east side of Stoughton. The school's 13.7 acre site aligns with a suggested minimum site area of 13 acres for a school of this size. The flat site and mowed open area offer ample space for physical education and outdoor activities. Storm water drainage issues on portions of the site can limit usability of green space at times. For further information regarding site function and issues with traffic flow, refer to Educational Adequacy Assessment.

SANDHILL ELEMENTARY SCHOOL

SITE CAPACITY ANALYSIS

Sandhill Elementary is located on the north side of Stoughton within a residential neighborhood. The hillside site covers 19.2 acres. Rule-of-thumb guidelines for a school this size would suggest a minimum of 15 acres. However, sloped areas to the west of the playground and to the north of the building, as well as storm water infiltration areas, limit the usable area of the site significantly. For further information regarding site function and issues with traffic flow, refer to Educational Adequacy Assessment.

RIVER BLUFF MIDDLE SCHOOL

SITE CAPACITY ANALYSIS

River Bluff Middle School is located near downtown Stoughton and shares a site with the Administration Building, Historic Armory Building, and 1892 School. The north edge of the site is defined by a steep slope which prohibits any access from the north. Recommended minimum site size for a middle school with this enrollment is 27 acres. Actual middle school site size of 12 acres is very limiting for the school, and creates a number of difficulties with playgrounds, athletic spaces, and traffic flow. For further information regarding site function and challenges, refer to Educational Adequacy Assessment.

STOUGHTON HIGH SCHOOL

SITE CAPACITY ANALYSIS

Stoughton High School is located near the center of Stoughton, just a block off of Main Street. Rule-of-thumb guidelines for a high school of this size would suggest a minimum site size of 39 acres. The High School is right in line with those expectations with an actual site size of 47.2 acres. Most of the site's open space is occupied by a stadium, varsity baseball/softball fields, and practice fields. Some athletic JV and practice fields are located off site. There are some inefficiencies in the current site layout, and parking shortages have also been noted. For additional information regarding the function and challenges of the site, refer to the Educational Adequacy Assessment.

STOUGHTON AREA SCHOOL DISTRICT

BUILDING CAPACITY AND UTILIZATION

As enrollment fluctuations affect school districts nationwide, the physical capability of each building will determine whether or not capacity should increase beyond its present level, or if it will be necessary to move students to other buildings more capable of accommodating such enrollment shifts. This analysis should provide a guide to measure each building's capability to handle a student population and provide a measuring stick to keep up with the changing needs.

Historical Perspective on School Capacity
It is worthwhile to briefly cover why schools are not able to contain the same number of students as when they were originally constructed. America's public schools can be traced back to 1640 when founders assumed families bore the responsibility of raising and educating a child. Gradually, programs were added by Federal and State mandates that have dramatically affected the educational environment. The trend of increasing responsibilities for public schools has accelerated ever since.

1900-1910
- Health Instruction added
- 1910-1930
- Physical Education
- Vocational Education

1940's
- Business Education
- Art & Music
- Speech & Drama
- Half-Day Kindergarten
- Lunch provided

1950's
- Expanded Science & Math
- Expanded Art & Music
- Foreign Language
- 1960's
- Advanced Placement
- Head Start
- Title I (Reading)
- Consumer & Career Education

1970's
- Special Education

1980's
- Computer Education
- English as a Second Language
- Early Childhood
- Full-Day Kindergarten
- At-Risk Programs
- After School Programs

1990's
- Expanded Computer / Internet
- Inclusion of Special Education Learners
- School-to-Work Programs

2000's
- Standardized Testing
- Personalized Learning
- Foreign Language for Elementary
- Common Core Standards
- Transgender Amenities
- One-to-One Initiatives
- Career Readiness
- Maker Spaces
- Behavior Adjustment
- Breakfast provided
- Title IX (gender equality including athletics)

In many districts, spaces that were once used as standard classrooms have been transformed into multiple educational environments that have to act as offices, teaching space for 4-6 students, and reference libraries for several different areas associated with Special Education. One of the most dramatic program requirements of the past 30 years may become obsolete in the near future. Computers first made their presence in schools around 1983 when a single Apple II was assigned to one building. The computer labs created in the 90's and early 2000's are now transitioning as laptops and hand-held tablets become the norm for student production and research. The bottom line is the demand on educational space is always changing, and it should be expected that buildings need to change along with those programs.

TYPES OF CAPACITY CALCULATIONS

For this study, EUA is using (3) methods to calculate student capacity:

1. Functional Capacity Based on District Desired Class Size

Historically, building capacity has been determined by counting the number of available teaching stations and multiplying by the district's desired number of students per class. The number of students per class is set by the district based on a practical understanding of how many students a teacher can effectively manage while maintaining district expectations for quality and control. The following guidance has been provided by the school district:

STOUGHTON SCHOOL BOARD - DISTRICT DESIRED CLASS SIZE	
GRADE LEVEL	CLASS SIZE
5K - Grade 1	22 students
Grades 2 - 3	24 students
Grades 4 - 8	26 students
Grades 9 - 12	25-28 students

At the elementary level, only regular homerooms are included in the capacity analysis because students remain in their assigned classroom most of the day. At the middle and high school level, all regularly scheduled instructional spaces are used in the calculation because students are not expected to return to a homeroom after instruction in other spaces.

Several areas are not included in this calculation:

- Special education rooms are not typically included because it is unlikely that other students would fill the seats of these students while they are receiving additional instruction elsewhere in the building.
- Most resource areas and labs are not factored into this calculation because these areas are intended to supplement instruction for ther learning areas located somewhere else in the school. For example, a computer lab dedicated to an English Department is not included because the students are physically leaving one space to use the other as a resource.

The number generated by this calculation is sometimes referred to as the "Maximum Capacity" for the

building. This number, however, can be misleading because it is unlikely that every room will be used at 100% capacity all the time. At the middle and high school levels, the capacity calculation needs to account for teacher prep time, bell schedules, and tutoring needs which would drop the total utilization of any one space. Even at the elementary school level, because of fluctuations in student population it is impractical to expect every classroom to be filled completely to maximum capacity in any given school year. Taking school schedules, programmatic issues, and fluctuations in student populations into consideration, the Maximum Capacity is multiplied by a utilization rate to create the final "Functional Capacity."

Utilizations rates can very district-to-district depending on school size, scheduling procedure, and availability of resource space. Target utilization rates, however, generally fall within the following ranges:

- Elementary schools: 90-95% utilization
- Middle and high schools: 70-80% utilization

When the maximum capacity is modified to reflect the appropriate utilization rate, the resulting **Functional Capacity based on District Desired Class Size** provides a reasonably accurate representation of how many students a school can accommodate with little or no change to room configuration or staffing policies.

2. Functional Capacity Based on Learning Environment Area

While class size calculations provide a reasonable estimation of capacity based on current room usage, they do not account for spaces whose physical areas are either too small or too large for their intended uses. They also do not readily account for the potential of non-traditional learning spaces outside of classroom environments. To better understand what a building's potential capacity could be, a space by space analyses of available learning area is often required.

Based on the best practice data currently available, it is possible to define the square footage (SF) per student needed for optimum performance in each learning space:

- Kindergarten Level Learning Areas (4K and 5K): 50 – 60 SF per student
- Elementary Grade Level Learning Areas (1-5): 30 – 40 SF per student
- Middle/High School Level Learning Areas (6-12): 25 – 35 SF per student

Specialty instruction areas like shops, art rooms, and lab spaces have their own "Best Practice" square foot allowances per student. To calculate the total capacity of a building, then, each academic space is analyzed to determine its area in square feet (SF). This area is then divided by the recommended SF/student to determine the maximum number of occupants for each learning space.

The Maximum Capacity can then be calculated by totaling the number of occupants in each individual learning space. As in method one, at the elementary level, only "homeroom" learning environments are included in the calculation, whereas all available instructional spaces are included at the middle and high school levels. This resulting Maximum Capacity is multiplied by the target utilization rate to determine the final Functional Capacity.

The **Functional Capacity based on Learning Area** provides a clearer picture of what a building's capacity could be if all learning areas were utilized at optimal efficiencies. It is important to note that

achieving this level of efficiency may have direct impacts on staffing procedures, or even require the reconfiguration of space. For example, two extra-large classrooms may contain enough area within them to support three classes worth of students. To utilize that potential, however, additional staff may be required to support the unusually large class sizes, or the spaces may need to be reconfigured to create three individual rooms.

3. Capacity Based on Gross Building Area

Gross Building Area refers to the total size of the building including instructional space, support space, mechanical space, circulation and walls. Capacity Based on Gross Building Area, then, is a more general calculation which evaluates the capacity based not only on learning space, but on guidelines for total building area per student.

Total building area standards are derived from historic data compilation, optimal planning models for space utilization, and from regional and national educational research and planning organizations. There is no recognized national standard for school size, and only a few states publish area guidelines. The Minnesota Department of Children, Families & Learning - Guide for Planning Construction Projects (Published 2002) is one such guideline. It provides a range of acceptable areas based on school size. Smaller schools generally require more area per student than larger schools.

- Elem. School: 125 – 155 sq. ft. per student
- Middle School: 170 – 200 sq. ft. per student
- High School: 200 – 320 sq. ft. per student

We have found these ranges to be reasonably consistent with gross square footage of school building projects built in Wisconsin over the past fifteen years.

- Elem. School: 125 – 170 sq.ft. per student
- Middle School: 150 – 220 sq.ft. per student
- High School: 200 – 260 sq.ft. per student

These two sources of information can be averaged to create a recommended area per student for each building type. The **Capacity based on Gross Building Area** can then be calculated by dividing the existing building SF by the average recommended SF per student. The resulting data can then be used as an indicator for how the school compares with regional norms.

Gross building area per student recommendations are often used as a baseline guide for planning and analysis. For existing schools, however, capacity calculations based on Gross Building Area can serve as indicators for overall building efficiencies. Lower SF to student ratios would typically indicate that there is less auxiliary or support space present within the building. High SF per student numbers may reflect the presence of amenities that may not always be typical for schools of comparable size (i.e. more specialist or intervention space, more gym or cafeteria space, auditorium space, etc.). Smaller schools are typically less efficient than larger schools.

STOUGHTON AREA SCHOOL DISTRICT

CAPACITY AND UTILIZATION ANALYSES

It is important to note that the capacity of a building can change over time, even if the building footprint does not. Over the past decade, recommended space provided per student has increased as teaching methodologies have evolved, and student learning now occurs in a variety of ways and in many non-traditional environments. Factors that have historically impacted school district capacity across the state of Wisconsin have included:

- Space needs to support learning environments for small and large-group collaboration
- Space needs to accomodate technology use, equipment and infastructure
- Space needs to support children with special needs in the least restrictive environments
- Space needs to support title IX equitable athletic opportunities
- Space needs to support specialists/interventionists; speech, occupational and physical therapy services and Title I programs
- Space needs to support increased community use of school facilities and site

The following table summarizes current enrollment verses calculated capacities in each school:

BUILDING CAPACITY				
BUILDING	CURRENT ENROLLMENT (SEPTEMBER 2017)	FUNCTIONAL CAPACITY BY DISTRICT DESIRED CLASS SIZE [b]	FUNCTIONAL CAPACITY BY LEARNING AREA [c]	CAPACITY BASED ON GROSS BUILDING AREA [d]
Fox Prairie Elementary	381 students	430 students	431 students	340 students
Kegonsa Elementary	333 students	475 students	466 students	371 students
Sandhill Elementary	479 students	569 students	609 students	609 students
River Bluff Middle School	662 students	665 students	709 students	515 students
Stoughton High School	935 students	1312 students	1222 students	1014 students

a Based on 55 SF per Kindergarten student, 35 SF per student grades 1-5, and 30 SF per student for general classrooms grades 6-12. Science Rooms, FACE Labs, and Art Rooms use 50 SF per student. Tech Ed Lab spaces use 50-100 sq. ft. per student depending on the academic focus.

b. Based on recommended students per instructor as provided by Stoughton Area School District

c. Functional Design Capacity is 90% of maximum capacity at elementary, 71% of maximum capacity at intermediate schools, and 71% at high schools.

d. Based on 150 SF per student at Elementary, 180 SF per student at Intermediate, and 230 SF per student at High

FOX PRAIRIE ELEMENTARY SCHOOL
BUILDING CAPACITY SUMMARY

Fox Prairie Elementary serves grades kindergarten through fifth-grade for the Stoughton School District. The school is configured as a three-section elementary with one bubble-room to accomodate larger class sizes. As of September 2017, enrollment was 381 students. For the purposes of this study capacity was calculated in three different ways.

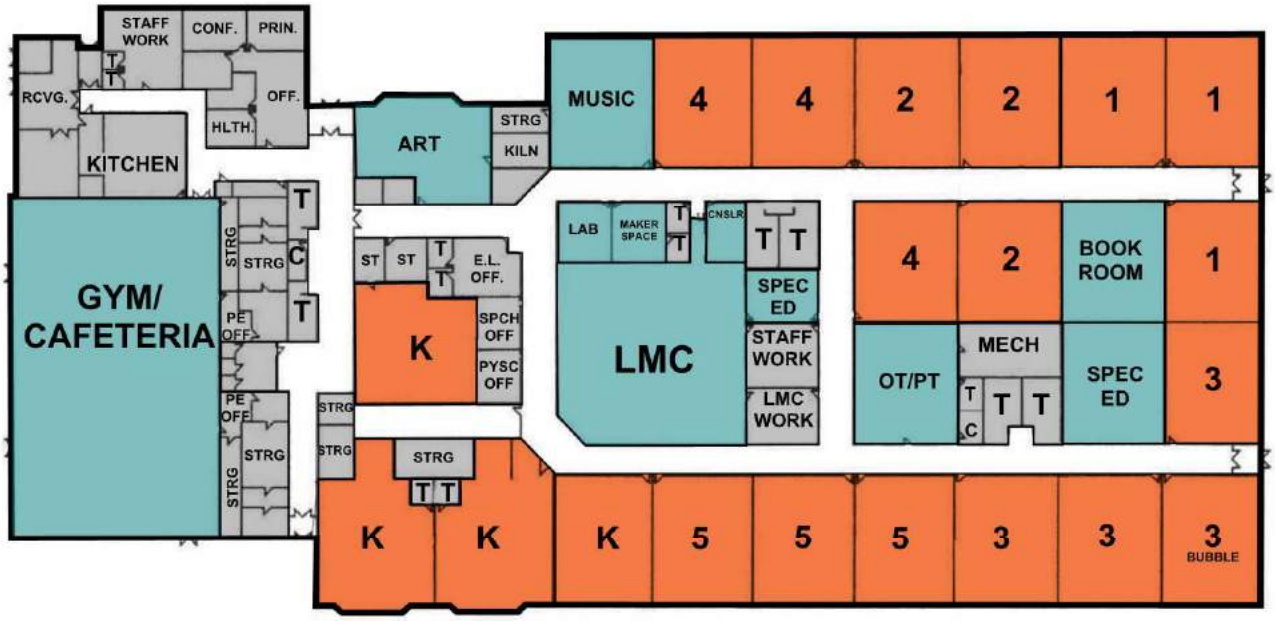
- Functional Capacity based on District Desired Class Size is the method that most realistically captures capacity numbers for the building in its existing configuration. This calculation yields a functional capacity of **430 students**, which would mean that the building is nearing capacity, but could theoretically support an additional 29 students over current enrollment. This calculation, however, does not take into account the size of the individual classrooms, or the need for support space outside of the classroom.

- Functional Capacity based on Learning Area yields a similar capacity of **431 students**. Based on learning area, the building is nearing capacity but could support up to 40 more students. The alignment of this calculation versed previous calculation shows that on average, classrooms are sized appropriately for the number of students in each room. However, this calculation still does not account for the amount of support space outside of the classroom.

- Capacity based on Gross Building Area suggests a far smaller capacity of only 340 students. Based on this calculation, the building is already over capacity by 41 students. This means that the overall size of the building is somewhat smaller than what would be expected for a new building with a smaller capacity. Because there is ample space for primary instruction, this indicates that the building does not have as much available space for uses outside of the classroom. The combined cafeteria/gymnasium is one example of this. It is also important to note the lack of student breakout and collaboration space outside of the primary classroom environment.

The different capacity totals demonstrate that there is sufficient space for primary large group instruction in the building's current configuration, but there may be a lack of student support space within the building. The following diagrams illustrate the current building utilization, and the calculations used to generate each total:

BUILDING UTILIZATION PLAN



Building Utilization

- STANDARD CLASSROOM
- SPECIALTY SPACE
- POTENTIAL STANDARD CLASSROOM
- NO CORE CLASSES

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Fox Prairie Elementary

Room Number	Room Name	Room Area (SF)	Capacity by Desired Class Size	Capacity by Learning Area	Capacity by Gross Building Area
200	Art	1000			
207	Kindergarten	995	**22**	**18**	
208	Kindergarten	1130	**22**	**21**	
208T	Toilet	45			
209	Kindergarten	1190	**22**	**22**	
209T	Toilet	45			
300	Music	870			
301	4th Grade Classroom	870	**26**	**25**	
302	4th Grade Classroom	870	**26**	**25**	
303	2nd Grade Classroom	870	**24**	**25**	
305	4th Grade Classroom	900	**26**	**26**	
306	OT/PT	890			
308	5th Grade Classroom	870	**26**	**25**	
309	5th Grade Classroom	875	**26**	**25**	
310	5th Grade Classroom	875	**26**	**25**	
311	Kindergarten	870	**22**	**16**	
312	LMC Workroom	270			
313	Staff Workroom	280			
314	Special Education	320			
317	Counselor	170			
321	Maker Space (Future)	245			
322	Lab	245			
323	LMC	2490			
401	2nd Grade Classroom	900	**24**	**26**	
402	1st Grade Classroom	900	**22**	**26**	
403	1st Grade Classroom	900	**22**	**26**	
404	2nd Grade Classroom	865	**24**	**25**	
405	Book Room	865			
406	1st Grade Classroom	865	**22**	**25**	
407	Special Education	870			
408	3rd Grade Classroom	865	**24**	**25**	
409	3rd Grade Classroom	890	**24**	**25**	
410	3rd Grade Classroom	895	**24**	**26**	
411	3rd Grade Classroom (Bubble)	895	**24**	**26**	
	Max Capacity		478	479	
	Functional Capacity (90%)		**430**	**431**	
	Gross Building Area	51,040			**340**

KEGONSA ELEMENTARY SCHOOL
BUILDING CAPACITY SUMMARY

Kegonsa Elementary serves grades kindergarten through fifth-grade for the Stoughton Area School District. The school is currently configured as a three-section elementary, but has served as a four-section elementary school in the past. As of September 2017, enrollment was 333 students. For the purposes of this study capacity was calculated in three different ways.

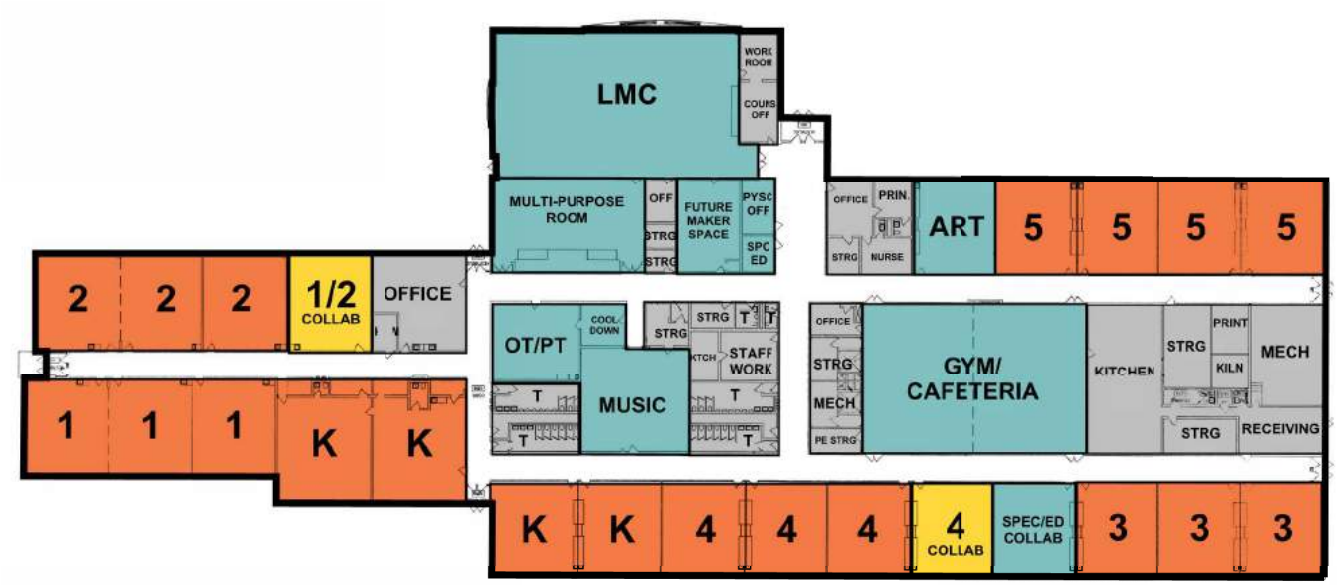
- Functional Capacity based on District Desired Class Size is the method that most realistically captures capacity numbers for the building in its existing configuration. This calculation yields a functional capacity of **475 students**, which would mean that the building has ample room for growth, and could support up to an additional 164 students over current enrollment. It is important to note that there are three rooms included as classrooms in this calculation (shown in yellow) that currently serve as bonus collaboration or project rooms for the school. While these rooms could easily serve as primary classrooms, there appears to be a lack of appropriately designed spaces for student breakout/collaboration work outside of the classroom.

- Functional Capacity based on Learning Area yields a similar capacity of **466 students**. Based on available learning area, the building could support increases in enrollment for up to an additional 162 students. The alignment of this calculation versed the previous calculation shows that on average, classrooms are sized appropriately for the number of students in each room. However, this calculation still does not account for the amount of support space outside of the classroom.

- Capacity based on Gross Building Area suggests a far smaller capacity of only 371 students. Based on this calculation, the building is much more closely aligned to its current enrollment, with potential room for only 38 additional students. This means that the overall size of the building is about what would be expected for a new building with a similar capacity. Because there is excessive space available for primary instruction, this indicates that the building does not have as much available space for uses outside of the classroom. The combined cafeteria/gymnasium is one example of this. It is also important to note the lack of student breakout and collaboration space outside of the primary classroom environment. Because space is available within the facility, it could be possible to address some of these needs in the future through the reconfiguration of existing spaces.

The different capacity totals demonstrate that there is more than enough space for primary large group instruction in the building's current configuration, but there may be a lack of student support space within the building. The following diagrams illustrate the current building utilization, and the calculations used to generate each total:

BUILDING UTILIZATION PLAN



Building Utilization

- STANDARD CLASSROOM
- SPECIALTY SPACE
- POTENTIAL STANDARD CLASSROOM
- NO CORE CLASSES

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Kegonsa Elementary

Room Number	Room Name	Room Area (SF)	Capacity by Desired Class Size	Capacity by Learning Area	Capacity by Gross Building Area
1	3rd Grade Classroom	860	**24**	**25**	
2	3rd Grade Classroom	860	**24**	**25**	
3	3rd Grade Classroom	860	**24**	**25**	
4	Special Ed / 3rd Grade Collab	870			
5	4th Grade Collab Room	870	**26**	**25**	
6	4th Grade Classroom	870	**26**	**25**	
7	4th Grade Classroom	870	**26**	**25**	
8	4th Grade Classroom	870	**26**	**25**	
9	Kindergarten	870	**22**	**16**	
10	Kindergarten	910	**22**	**17**	
11	Kindergarten	1065	**22**	**19**	
12	Office	880			
16	Art Room	870			
17	5th Grade Classroom	870	**26**	**25**	
18	5th Grade Classroom	870	**26**	**25**	
19	5th Grade Classroom	870	**26**	**25**	
20	5th Grade Classroom	870	**26**	**25**	
26	Music	1255			
27	Gym	3785			
32	Kitchen	1260			
101	Kindergarten	1100	**22**	**20**	
102	1st Grade Classroom	870	**22**	**25**	
103	1st Grade Classroom	870	**22**	**25**	
104	1st Grade Classroom	870	**22**	**25**	
105	2nd Grade Classroom	870	**24**	**25**	
106	2nd Grade Classroom	870	**24**	**25**	
107	2nd Grade Classroom	870	**24**	**25**	
108	1st/2nd Collab Room	870	**22**	**25**	
204	LMC	4120			
205	Multi-Purpose	1560			
208	(Future) Maker Space	660			
	Max Capacity		528	518	
	Functional Capacity (90%)		**475**	**466**	
	Gross Building Area	55,610			**371**

SANDHILL ELEMENTARY SCHOOL
BUILDING CAPACITY SUMMARY

Sandhill Elementary is the largest elementary in Stoughtion Area School District. The school was initially designed as a middle school, but now serves students in grades kindergarten through fifth grade. The building is configured four four-sections or each grade, and occupies two levels. As of September 2017, enrollment was 479 students. For the purposes of this study, capacity was calculated in three different ways:

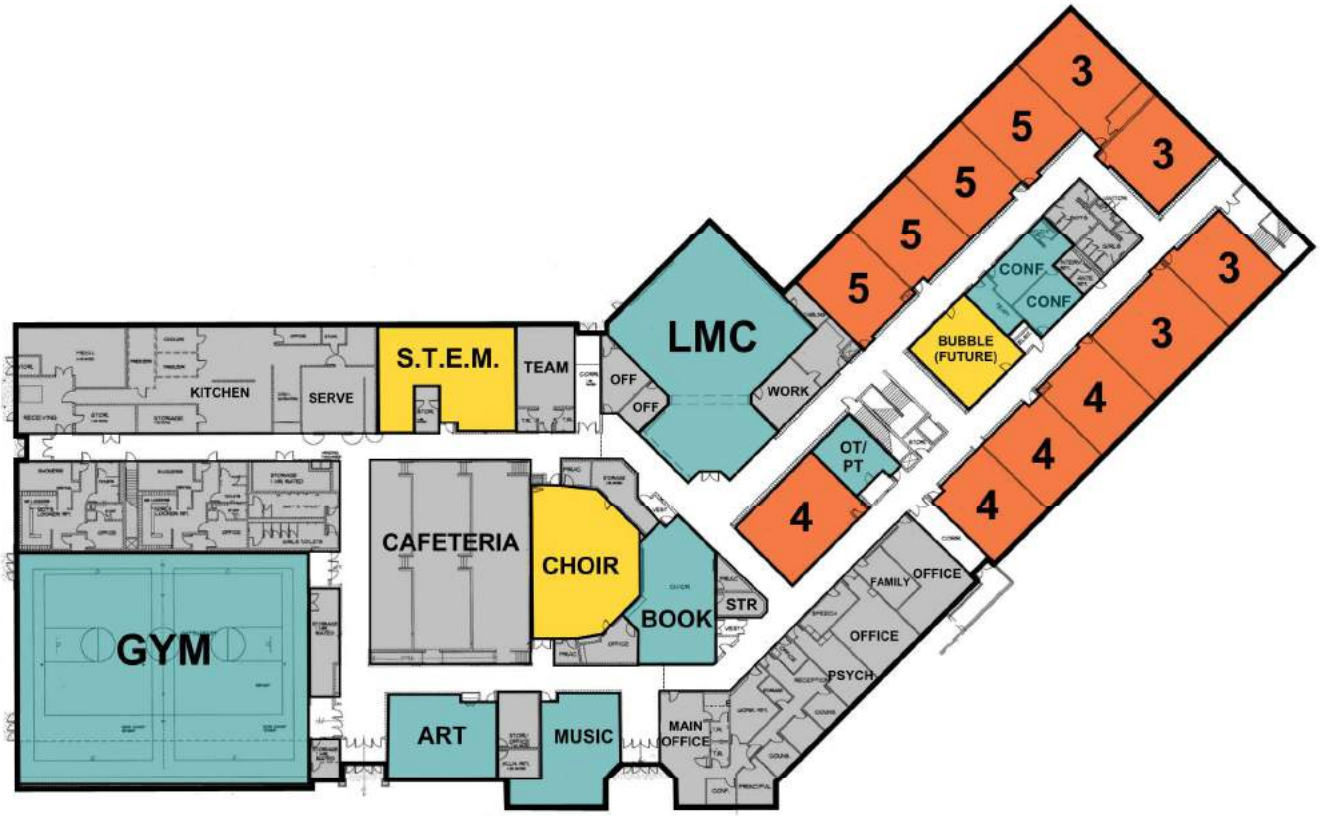
- Functional Capacity based on District Desired Class Size is the method that most realistically captures capacity numbers for the building in its existing configuration. This calculation yields a functional capacity of **569 students**, which would mean that the building has some extra space, with room for an additional 90 students over current enrollment. It is important to note that there are three rooms included as classrooms in this calculation (shown in yellow) that currently serve as a S.T.E.M. Room, Choir Room, and as a Bubble Classroom. These are spaces that the district's other elementary schools do not have. This school also appears to have more spaces available for breakout and intervention work than other schools. Breakout spaces, however, do not factor into this method of calculation.

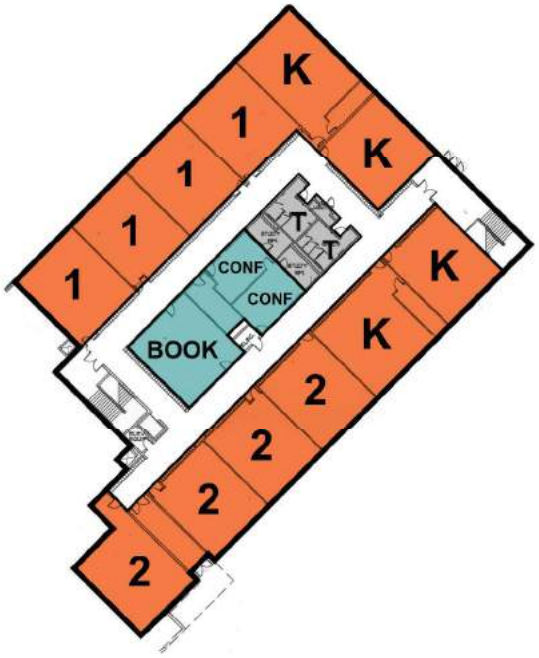
- Functional Capacity based on Learning Area yields an even larger capacity of **609 students**. Based on available learning area, the building could support increases in enrollment for up to an additional 132 students. The increased capacity yielded by this calculation is largely due to several classroom spaces that are larger than would be expected for the number of students served in the room. It is important to note, however, that this calculation still does not account for the amount of support space outside of the classroom.

- Capacity based on Gross Building Area suggests a similar capacity of **609 students**, or 103 more than currently served. This means that the overall size of the building is approximately in line with what would be expected for a new building based on its capacity by learning areas. The amount of support space outside of the primary learning environment is fairly well aligned with the amount of classroom space available. Unlike other elementary schools, the cafeteria and gym each have their own dedicated spaces. There is also more space available for breakout and intervention space, although these spaces are not ideally designed for those functions. Because space is available, it could be possible to address any space needs by reconfiguring existing spaces.

The similarity in capacity totals demonstrates that there is more than enough space within the building and that there is clearly room for additional student enrollment. The following diagrams illustrate the current building utilization, and the calculations used to generate each total:

BUILDING UTILIZATION PLAN





Building Utilization

- STANDARD CLASSROOM
- SPECIALTY SPACE
- POTENTIAL STANDARD CLASSROOM
- NO CORE CLASSES

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Sandhill Elementary

Room Number	Room Name	Room Area (SF)	Capacity by Desired Class Size	Capacity by Learning Area	Capacity by Gross Building Area
1	2nd Grade Classroom	920	**24**	**26**	
2	2nd Grade Classroom	840	**24**	**24**	
4	2nd Grade Classroom	845	**24**	**24**	
8	2nd Grade Classroom	865	**24**	**25**	
10	Kindergarten	1015	**22**	**18**	
14	Kindergarten	830	**22**	**15**	
15	Kindergarten	980	**22**	**18**	
16	1st Grade Classroom	885	**22**	**25**	
17	1st Grade Classroom	845	**22**	**24**	
20	1st Grade Classroom	850	**22**	**24**	
21	1st Grade Classroom	870	**22**	**25**	
102	Book				
108	4th Grade Classroom	1040	**26**	**30**	
111	4th Grade Classroom	830	**26**	**24**	
113	4th Grade Classroom	845	**26**	**24**	
114	Bubble Classroom	810	**26**	**23**	
117	4th Grade Classroom	850	**26**	**24**	
119	3rd Grade Classroom	1035	**24**	**30**	
120	3rd Grade Classroom	850	**24**	**24**	
124	3rd Grade Classroom	830	**24**	**24**	
125	3rd Grade Classroom	985	**24**	**28**	
126	5th Grade Classroom	890	**26**	**25**	
127	5th Grade Classroom	855	**26**	**24**	
130	5th Grade Classroom	855	**26**	**24**	
131	5th Grade Classroom	850	**26**	**24**	
133	LMC	3585			
136	STEM	1640	**26**	**47**	
147	Gym	8440			
148	Cafeteria	3610			
149	Art	1120			
150	Choir	1810	**26**	**52**	
151	Music	1140			
	Max Capacity		632	677	
	Functional Capacity (90%)		**569**	**609**	
	Gross Building Area	91,331			**609**

RIVER BLUFF MIDDLE SCHOOL
BUILDING CAPACITY SUMMARY

River Bluff Middle School serves grades 6th through 8th and is the only middle school for Stoughton Area School District. As of September 2017, enrollment was 662 students accommodated on two floor levels. Design of the middle school was completed at the same time as design for Sandhill (now) elementary school and the buildings are almost identical. For the purposes of this study capacity was calculated in three different ways:

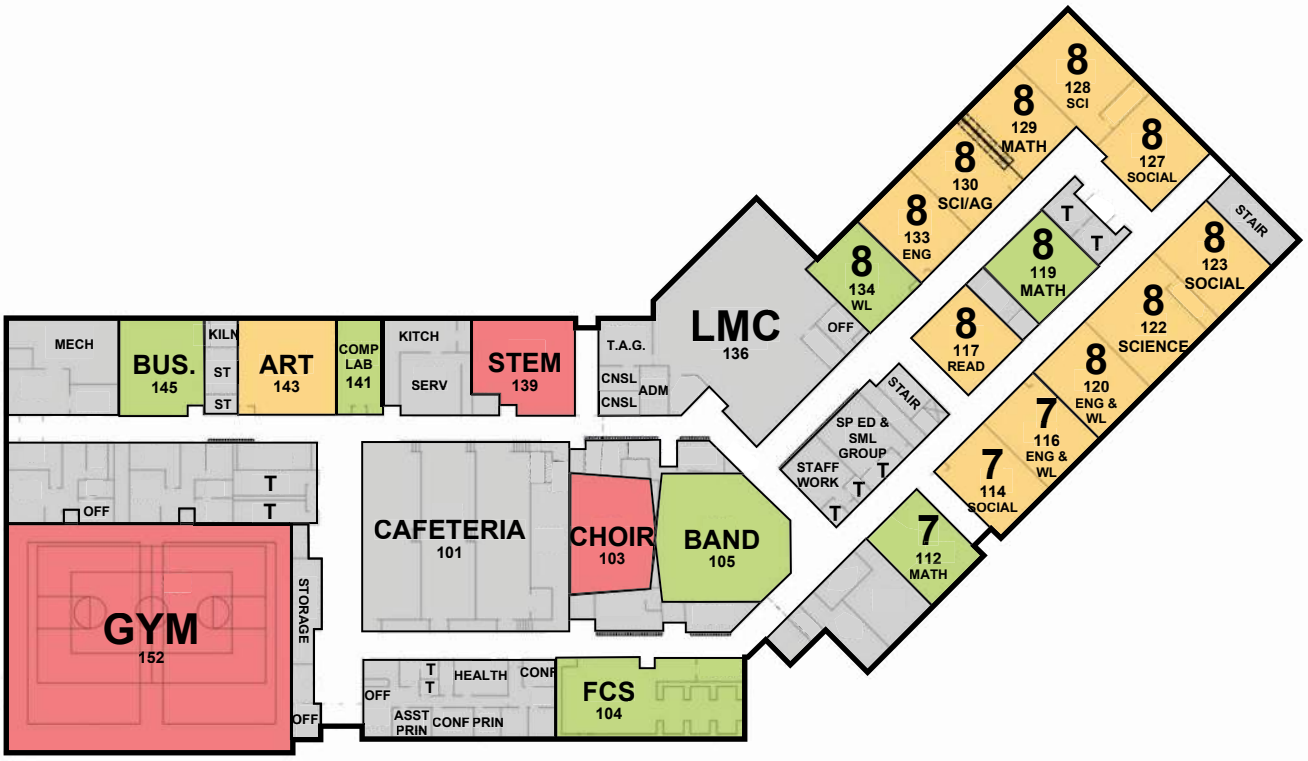
- Functional Capacity based on District Desired Class Size is the method that most realistically captures capacity numbers for the building in its existing configuration. This calculation yields a functional capacity of **665 students**, which means the building is nearing capacity. Core academic and areas for specials are utilized at a rate of 69% or just below target utilization rates of 71%. Actual average scheduled activity size of 24.6 is also slightly below desired average of 26.7. It is important to note that this calculation includes all regularly scheduled class spaces, but does not take unscheduled spaces for breakout groups or interventions into account.

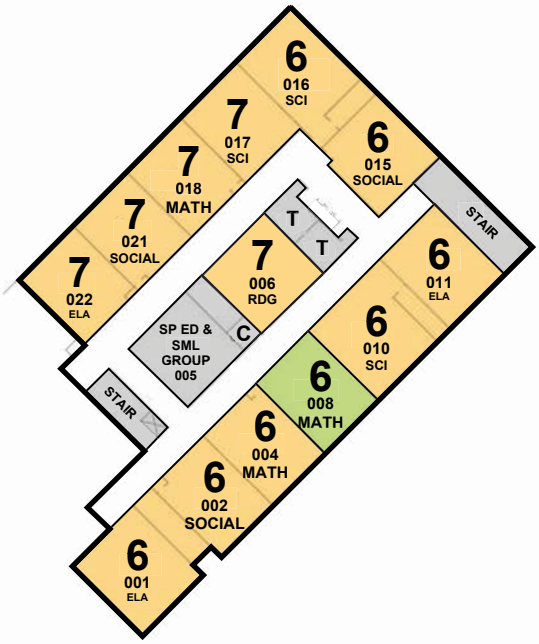
- Functional Capacity based on Learning Area yields a slightly larger capacity of **709 students**. Based on available learning area, the building could support increases in enrollment for up to an additional 47 students. Again, core academic spaces are utilized at a rate of 69%, but average class size of 24.6 is further below the expected average class size based on available area of 28.5. The increased capacity yielded by this calculation is largely due to several classrooms spaces that are larger than would be expected for the number of students served in the room, Including the Band and Orchestra rooms. It is important to note, however, that this calculation still does not account for any usage of unscheduled spaces for breakout or intervention work.

- Capacity based on Gross Building Area suggests a much smaller capacity of **515 students**, or 147 *less* than current enrollment. This means that the overall size of the building is smaller that what would be expected for a new building of similar enrollment. Because there appears to be sufficient space for scheduled activities, this indicates that the building is likely undersized when it comes to unscheduled resource space, student activity space, and circulation space.

The different capacity totals demonstrate that the building is nearing capacity for scheduled classroom activities. It also suggests that there may be an overall lack of student resource space within the building. The following diagrams illustrate the current building utilization, and the calculations used to generate each total:

BUILDING UTILIZATION PLAN





Building Utilization

- 76% - 100% UTILIZATION
- 51% - 75% UTILIZATION
- 0% - 50% UTILIZATION
- NO CORE CLASSES

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River Bluff Middle School - Utilization Study

Room No.	Primary Use of Room (Subject)	S.F. Area	Based on District Desired Class Size	Based on Available SF per Learning Area	Based on Total Square Feet of 92,700	Periods 1 7:55-8:47	2 8:51-9:42	3 9:46-10:37	4 10:41-11:32 6th lunch	5 11:36-12:27 7th lunch 12:10-1:01 8th Lunch	ADV 1:05-1:25	6 1:29-2:20	7 2:24-3:12	Avrg Class Size	# periods used (X)	% of use (X/7)
1	6th Grade - English Language Arts	905	26	30		22		23	25			28	23	24	5	71
2	6th Grade - Social Studies	830	26	28		23		24	25			27	22	24	5	71
4	6th Grade - Math	830	26	28		27		26	25			21	22	24	5	71
5	Special Education	790														
6	7th Grade - Reading	825	26	28		22		24	24			26	25		5	71
8	6th Grade - Math	850	26	28		23		26	24				26	25	4	57
10	6th Grade - Science	1,000	26	20		24		24	22			28	23	24	5	71
11	6th Grade - English Language Arts	835	26	28		28		24	23			20	22	23	5	71
15	Social Studies	810	26	27		26		24	22			22	25	24	5	71
16	6th Grade - Science	965	26	19		26		21	26			22	26	24	5	71
17	7th Grade - Science	875	26	18		26	28		28	28			28	28	5	71
18	7th Grade - Math	830	26	28		27	22		22	20			23	23	5	71
21	7th Grade - Social Studies	830	26	28		27	24		27	19			24	24	5	71
22	7th Grade - English Language Arts	850	26	28		25	29		27	22			26	26	5	71
100	Office	2,135														
101	Cafeteria	5,700														
103	Choir/Orchestra	1,305	26	37			20	26	30	15		9	11	19	6	86
104	Family Consumer Science	1,890	26	38			18		24	17			21	20	4	57
105	Band	2,280	26	65				26		20		24	17	22	4	57
112	7th Grade - Math	890	26	30		22	20			19			29	23	4	57
113	Special Education	535														
114	7th Grade - Social Studies	835	26	28		25	25		25	29			24	26	5	71
116	7th Grade - English & World Language	865	26	29		24	29		25	27			24	26	5	71
117	8th Grade - Reading	815	26	27		29	25	25		25		23		25	5	71
119	8th Grade - Math	850	26	28			27	27		20		28		26	4	57
120	8th Grade - English & World Language	860	26	29		30	25	22		25		25		25	5	71
122	8th Grade - Science	1,055	26	21		26	28		24	28			23	26	5	71
123	8th Grade - Social Studies	865	26	29		28	24	27		25		23		25	5	71
127	8th Grade - Social Studies	840	26	28		22	24	27		26		28		25	5	71
128	8th Grade - Science	995	26	20		22	27	22		28		27		25	5	71
129	8th Grade - Math	910	26	30		25	27	25		27		23		25	5	71
130	8th Grade - Science & Agriculture	865	26	17		28	26	27		25		22		26	5	71
133	8th Grade - English	860	26	29		21	22	25		26		28		24	5	71
134	8th Grade - World Language	860	26	29		24		25	25			22		24	4	57
136	LMC	3,700														
139	STEM	1,210	26	24			17	18	24	17		15	17	18	6	86
140	Kitchen & Serving	1125														
141	Computer Lab	620	26	21				24	19					22	2	29
143	Art	1,210	26	24			20	24	29	20		24		23	5	71
145	Business	1090	26	22			17	13		17		14		15	4	57
152	Gym6	8695	52	58			52	52	52	52		52	52	52	6	86
AVERAGE			26.7	28.5										24.6	4.8	69
	Max Capacity		936	999												
	Functional Capacity (71%)		**665**	**709**	**515**											
	Sept 2016 Enrollment	**662**														
	Actual Hourly Total					652	576	651	597	577		581	533			

STOUGHTON HIGH SCHOOL
BUILDING CAPACITY SUMMARY

Stoughton High School serves all students grades 9 through 12 for the Stoughton Area School District. As of September 2017, enrollment was 935 students. The school has seen a number of building additions, mostly for athletics and for auditorium space. For the purposes of this study capacity was calculated in three different ways:

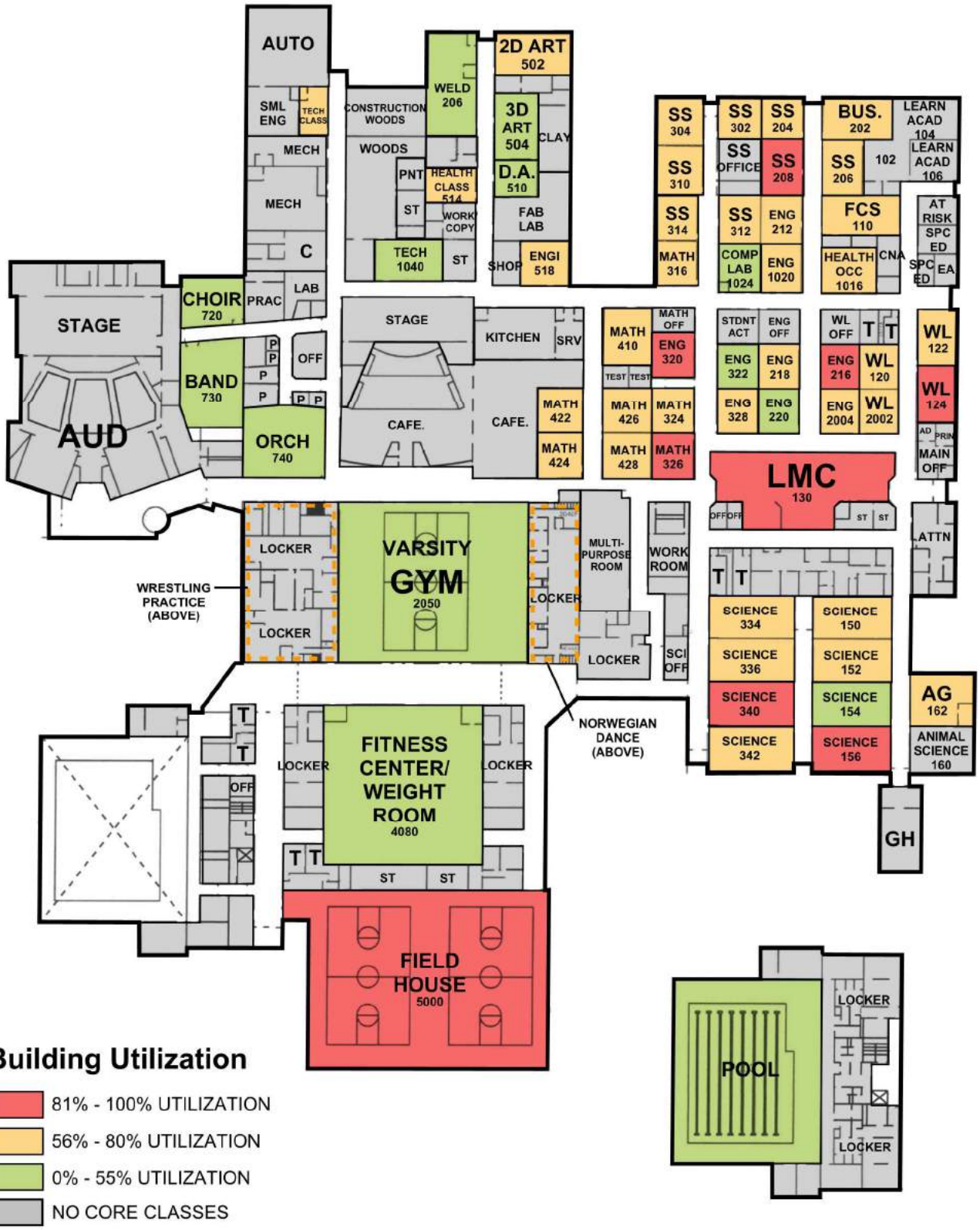
- Functional Capacity based on District Desired Class Size is the method that most realistically captures capacity numbers for the building in its existing configuration. This calculation yields a functional capacity of **1312 students**, which would mean that the building could support up to an additional 377 students. Scheduled academic and areas for specials are utilized at a combined rate of 65%, which is below target max utilization of 71%. Even more significantly, average size of scheduled activities is 21.6 students, which is substantially below district desired average size of 30.2 students. Much of the disparity in size occurs in the music, athletic, and technical education programs. It is important to note that this calculation includes all regularly scheduled spaces, but does not take unscheduled spaces for breakout groups or interventions into account.

- Functional Capacity based on Learning Area yields a slightly smaller capacity of **1222 students**, or 287 students over current enrollment. Again, core academic spaces are utilized at a rate of 65%. Average expected size of activities based on area is smaller than based on desired class size, at 28.2, but is still substantially larger than actual size of 21.6. It is important to note that many core classrooms do not have sufficient space for the desired number of students, while many areas for specials are substantially larger than what would be expected for actual class sizes. Again, this calculation does not account for any usage of unscheduled spaces for breakout or intervention work.

- Capacity based on Gross Building Area suggests a much smaller capacity of **1014 students**. Based on this calculation, the building would be nearing capacity with room for only 79 additional students. This means that the overall size of the building is more or less in line with what would be expected for a new building of similar enrollment. Because there appears to be more than enough space for specials, this could indicate a lack of space for students breakout and collaboration space. As noted before, many of the core academic classrooms are also undersized.

The different capacity totals demonstrate a disparity in space available for core classrooms verses specialty spaces. It may also suggest a shortage of space available for student breakout and collaboration space. The following diagrams illustrate the current building utilization, and the calculations used to generate each total:

BUILDING UTILIZATION PLAN



STOUGHTON HIGH SCHOOL

BUILDING CAPACITY ANALYSIS

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Stoughton High School - Utilization Study

Room No.	Primary Use of Room (Subject)	S.F. Area	Based On District Desired Class Size	Based on Available SF per Learning Area	Based on Total Square Feet of 233,143	Periods 1 8:00-8:50	2 8:55-9:45	3 9:50-10:40	4 10:45-11:35	Lunch / Home Room 11:40-12:05 12:10-12:35	5 12:40-1:30	6 1:35-2:25	7 2:30-3:20	Avrg Class Size	# periods used (X)	% of use (X/7)
102	VERIFY	710														
104	Learn ACAD	780														
106	Learn ACAD	1,085														
108	At Risk	450	15	15		14	14	14			10	11		13	5	71
110	Family Consumer Education	1,185	26	24		24	20	24		8	26	25		24	5	71
114	Special Education	400														
118	C.N.A.	380														
120	World Language	670	28	22		24		26	24		25		26	25	5	71
122	World Language	820	28	27		17		14	19		17	15		16	5	71
124	World Language	700	28	23		19	13	13	25		13	16	18	17	7	100
130	LMC	3,785	60	76		51	41	52	62		36	54	52	50	7	100
130b	Office - LMC	75														
130c	Group Room	140														
130d	Group Room	140														
150	Science	1,325	28	27			24	22	27		21	20		23	5	71
152	Science	1,325	28	27		26	20			22	12		22	20	4	57
154	Science	1,325	28	27		21	6			18				14	2	29
156	Science	1,325	28	27		20	18	23	25	18	14	21	23	21	7	100
158	Greenhouse	1,335	28	45												
160	Animal Science	930	28	31												
162	Agriculture	1,015	28	20			16	17	15	10	15			16	4	57
202	Business	1,040	28	35		9	10			19	14	20	13	13	5	71
204	Social Studies	620	28	21		24	28			16	23	24	22	24	5	71
206	Social Studies	820	28	27		21	25	22		19		25	20	23	5	71
208	Social Studies	820	28	27		21	19		9	5	24	19	28	20	6	86
212	English	695	28	23		15		22	28	16	20		25	22	5	71
216	English	670	28	22		22		23	25	15	11	22	19	20	6	86
218	English	665	28	22		28	22		27	16	20		27	25	5	71
220	English	660	28	22			29			17	21	24		25	3	43
302	Social Studies	630	28	21		22		28	25	24	24		18	23	5	71
304	Social Studies	820	28	27			26		28	19	22	22	26	25	5	71
306	Office - Social Studies															
310	Social Studies	800	28	27		26	20			20	23	13	24	21	5	71
312	Social Studies	710	28	24		27	19	20	15	23			10	18	5	71
314	Social Studies	650	28	22			22	23	27	20	22		24	24	5	71
316	Math	650	28	22		15		13		19	15	17	15	15	5	71
318	Office - Math	320														
320	English	655	28	22		17	28	20	25		25	21	19	22	7	100
322	English	665	28	22		26	29	29			23			27	4	57
324	Math	640	28	21		20	16			18	17	21	20	19	5	71
326	Math	650	28	22		28	22	22	18	20	19		17	21	6	86
328	English	665	28	22			19	26	19	23	18	13		19	5	71
334	Science	1,325	28	27		27	21			17	16	20	26	22	5	71
336	Science	1,325	28	27		18	22	26	23	21		22		22	5	71
340	Science	1,325	28	27		25	12	15	25	19	26	16	20	20	7	100
342	Science	1,325	28	27			15	20	22	11	25	21		21	5	71
410	Math	600	28	20		26	20		23	22		23	20	22	5	71
410A	Math - Testing	185														
410B	Math - Testing	185														
422	Math	770	28	26			20	13	27			12	22	19	5	71
424	Math	770	28	26		26		27		23	24	14	19	22	5	71
426	Math	775	28	26		24		23		40		8	20	19	4	57
428	Math	775	28	26				24	25		20	24	18	22	5	71
502	2D Art	1,215	24	24				22	18		19	13	23	19	5	71
504	3D Art	1,035	24	21		23		17		9				20	2	29
504A	3D Art - Clay	795														
504B	Kiln	160														
506	Welding	1,790	18	36			8	15						12	2	29
508	Sensory	365														
510	Digital Arts	585	24	20			23							23	1	14
512	Fabrication Lab	1,560														
514	Health	600	25	20		24		19	25		14	21		21	5	71
516	Work Room	355														
518	Engineering-Fab Lab	815	24	27		21	18		17		10	6	15	15	6	86
518A	Shop	360														
602	Tech Class (w/ 602&606)	550	24	18		11	11	11		22		18	15	13	5	71
604	Auto Lab	2,255														
606	Small Engines	695														
608	Construction	1,380														
610	Woods	2,075														
610D	Paint	325														

700A	Practice Room	95														
700B	Practice Room	85														
700C	Ensemble Room	500														
700D	Practice Room	75														
700E	Practice Room	65														
700F	Practice Room	170														
700G	Practice Room	235														
700H	Practice Room	75														
700I	Practice Room	80														
710	Practice Room	610														
720	Choir Room	1,080	**80**	**43**				**74**				**40**		**57**	**2**	**29**
730	Band	1,955	**100**	**56**			**58**		**29**			**9**		**32**	**3**	**43**
740	Orchestra	2,090	**65**	**60**		**18**			**17**				**14**	**16**	**3**	**43**
750	Office	555														
810	Pool Director	160														
812	Control Room	170														
814	Office	95														
900	Pool	9,535	**28**	**32**											**0**	**0**
902	Men's Locker Room	1,390														
904	Office - Coach	135														
906	Family Locker Room	650														
908	Office - Life Guards	135														
910	Women's Locker Room	1,315														
1002	Office - EA's	270														
1014	Office - World Language	500														
1016	Health OCC	910	**28**	**30**		**23**		**22**	**25**		**28**		**8**	**21**	**5**	**71**
1018	Office - English	500														
1020	English	695	**28**	**23**				**26**	**26**		**22**	**26**	**17**	**23**	**5**	**71**
1022	Student Activities	500														
1024	Literacy Lab	630	**15**	**21**											**0**	**0**
1032	Kitchen - Server	1,032														
1036	Kitchen	1,180														
1038	Stage - Storage	2,070														
1040	Tech Class (w/ 608&610)	940	**24**	**19**					**19**					**19**	**1**	**14**
2002	World Language	670	**28**	**22**			**19**	**22**			**18**	**15**	**21**	**19**	**5**	**71**
2004	English	655	**28**	**22**		**13**	**8**		**19**		**22**	**23**	**22**	**18**	**6**	**86**
2020	Multi-Purpose - Resource	2,000?														
2026	Cafeteria	2,575														
2030	Cafeteria	4,755														
2100	Auditorium	4,315														
2109	Multi-Purpose Room/Seating	1,200														
2110	Multi-Purpose Room/Seating	1,200														
2117	Stage	2,705														
2121A	Dressing Room	265														
2121B	Dressing Room	270														
2123	Scene Shop	595														
2040	Women's Locker Room	1,675														
2040A	Storage - Locker Room	240														
2040C	Showers	255														
2040F	Equipment	225														
2042	Office	135														
2050	Varsity Gym	9,990	**32**	**50**			**25**				**29**	**28**		**27**	**3**	**43**
2050W	Wrestling Practice	2,920														
2058	Storage - Wrestling Matts	260														
2060	Men's Locker Room	1,335														
2060A	Office - Locker Room	295														
2060B	Office - Locker Room	210														
2060F	Showers	140														
4044	Women's Locker Room	1,360														
4044B	Office - Locker Room	250														
4060	Men's Locker Room	1,320														
4060C	Showers	335														
4072	Locker Room	1,090														
4080	Fitness Center	7,930	**32**	**40**			**16**	**14**			**14**	**17**		**15**	**4**	**57**
4084	Laundry	265														
4092	Locker Room	1,090														
5000	Fieldhouse	13,600	**32**	**68**		**29**	**28**	**20**	**33**		**24**	**31**	**32**	**28**	**7**	**100**
5100	Office - Coach	290														
5100A	Conference Room	165														
5100B	Conference Room	155														
M100	Norwegian Dance Room	3,200														
M200	Wrestling Room	4,465														
P108	Pool - Timing and Scoring	155														
AVERAGE			30.3	28.2										**21.6**	**4.6**	**65**
	Max Capacity		1848	1720												
	Functional Capacity (71%)		**1312**	**1222**	**1014**											
	Sept 2017 Enrollment	**935**														
	Actual Hourly Total					845	830	863	816	569	841	810	780			

four:

EDUCATIONAL ADEQUACY ASSESSMENT

- Fox Prairie Elementary School PAGE 159
- Kegonsa Elementary School PAGE 167
- Sandhill Elementary School PAGE 177
- River Bluff Middle School PAGE 185
- High School PAGE 195
- Yahara PAGE 205
- Historic 1892 Administration Building PAGE 211

FOX PRAIRIE ELEMENTARY SCHOOL

EDUCATIONAL ADEQUACY ASSESSMENT SUMMARY

CRITERIA	OBSERVATION HIGHLIGHTS	EVALUATION
SITE	Site is generously sized with ample room for playground structures, hard-surface playground areas, and green space. Drainage issues, however, restrict usability portions of the site. Parent pick-up and drop-off areas are separated from parking and bus areas, however there is insufficient queuing space for parents, which can create significant backups and congestion at the street.	FAIR
SAFETY	Exterior doors are locked, and visitor entry requires buzz in from the office. However, once visitors are inside the building they have full access to the entire building and are not restricted to the office area. A security camera system is in place, and plans are currently underway to expand this system. Exterior doors are not electronically monitored, and classroom doors are not equipped with intruder hardware.	FAIR
SIZE & PROPORTION	Most classrooms are appropriately sized for large group classroom uses.	GOOD
SPACE TYPE & ADJACENCY	Classrooms generally work well for large group and lecture uses. However, there is little space available outside the primary classroom for breakout group work, collaboration, or personalized interventions. Shared Gymnasium/Cafeteria space can create scheduling conflicts. Areas for specialists and special education in several cases have been adapted from standard classrooms and are not designed for their current uses.	FAIR
EQUIPMENT & INFRASTRUCTURE	Wireless Internet access is available throughout the building. Classrooms are equipped with smart boards and chrome books are widely used. Electrical outlets are often in short supply. Some science casework upgrades are needed, and in some cases outdated chalkboards still need to be removed.	GOOD
FURNITURE	Furniture in much of the building is heavy and difficult to reconfigure. This limits the flexibility of the education spaces and does not support reconfiguration for group work or student-centered learning strategies.	POOR
ENVIRONMENT	Learning spaces are generally well-maintained and in good shape. Some classrooms, however, lack access to natural light, and overall building finishes can feel somewhat institutional.	FAIR

KEY

GOOD	Most of criteria assessed was found to be acceptable and satisfied its purpose
FAIR	Some of the criteria assessed was found to be acceptable, while other criteria assessed was unacceptable and did not satisfy its purpose
POOR	Most of criteria assessed was found to be unacceptable and did not satisfy it's purpose

FOX PRAIRIE ELEMENTARY SCHOOL

SITE ASSESSMENT

A

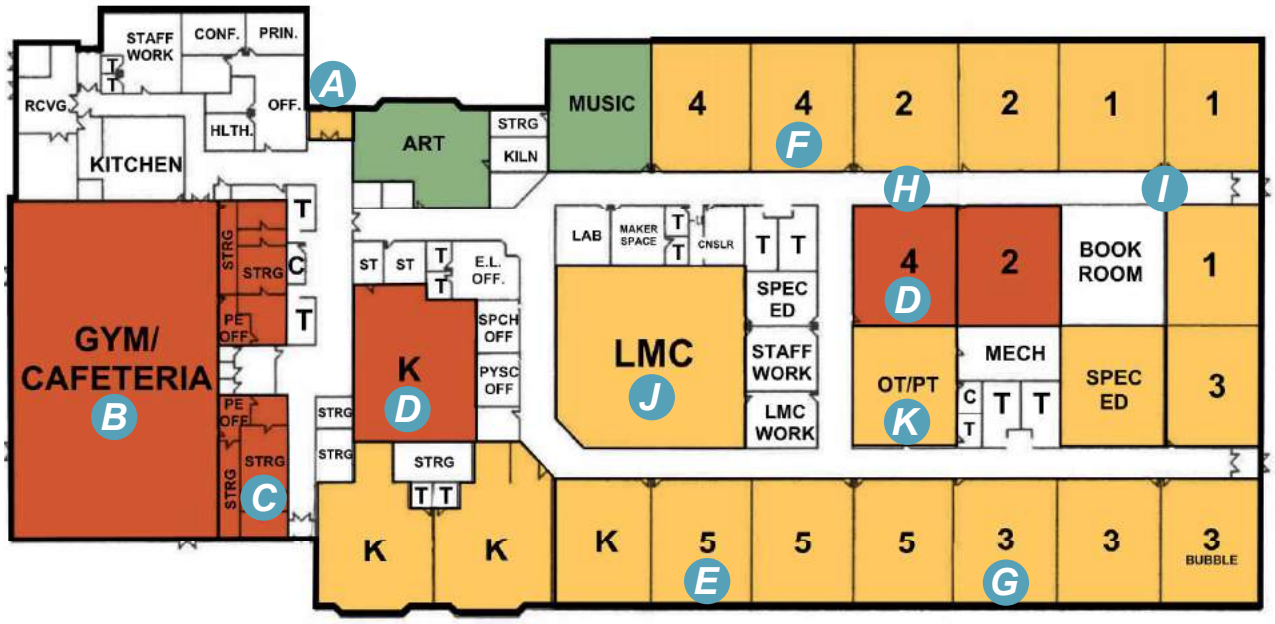
Site / Safety: Insufficient queuing space for parent pick-up along West South Street creates traffic flow and congestion concerns.

B

Site: Depressed areas along south side of playground do not drain well, and can become unusable.

FOX PRAIRIE ELEMENTARY SCHOOL

FLOOR PLAN



A

Safety: The entrance sequence is not fully secured. Guests who are allowed entry into the building, enter into the public corridor rather than a controlled office environment.

B

Space Type and Adjacency: Shared gymnasium and cafeteria space creates scheduling conflicts. Turnover of space after lunch hour puts pressure on staff.

C

Space Type and Adjacency: Former locker rooms are now used for storage. These spaces could be redesigned to function more efficiently.

D

Environment: Several classrooms have no natural daylight.

E

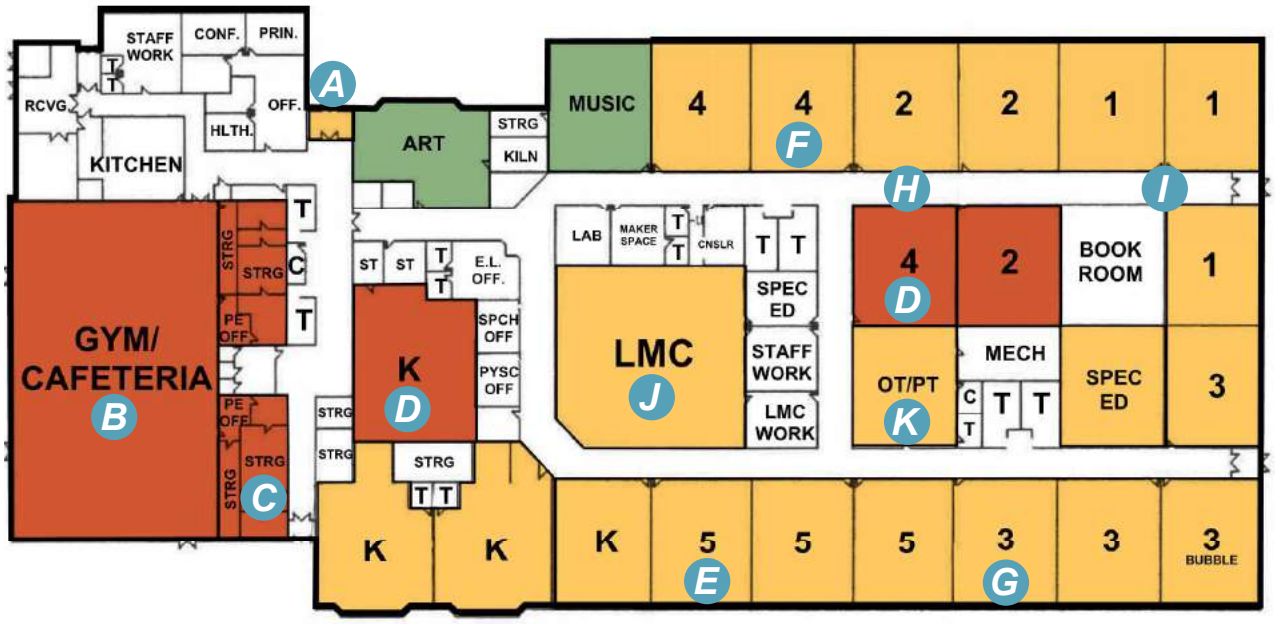
Furniture: Furniture throughout the building is too heavy to reconfigure, limiting the opportunity to reconfigure spaces for different educational uses.

F

Environment: Classrooms still have original chalkboards with new whiteboards installed over them.

FOX PRAIRIE ELEMENTARY SCHOOL

FLOOR PLAN



G

Technology: Each classroom has digital projection or electronic displays. Chromebooks are used and wireless internet is available throughout. Electrical outlets for charging devices, however are in short supply.

H

Safety: Corridors have no visibility from classrooms to monitor students.

I

Space Type and Adjacency: Current classrooms lack breakout spaces for group work or project-based learning.

J

Space Type and Adjacency / Furniture: The LMC lacks ideal flexibility for collaboration, project-based work, and group presentations. Furniture upgrades are underway to address some of these concerns.

K

Space Type and Adjacency: OT/PT, SPEC Ed, and Reading Specialists are all located in standard classrooms. These rooms are quite large, and are not designed for their current uses.

KEGONSA ELEMENTARY SCHOOL

EDUCATIONAL ADEQUACY ASSESSMENT SUMMARY

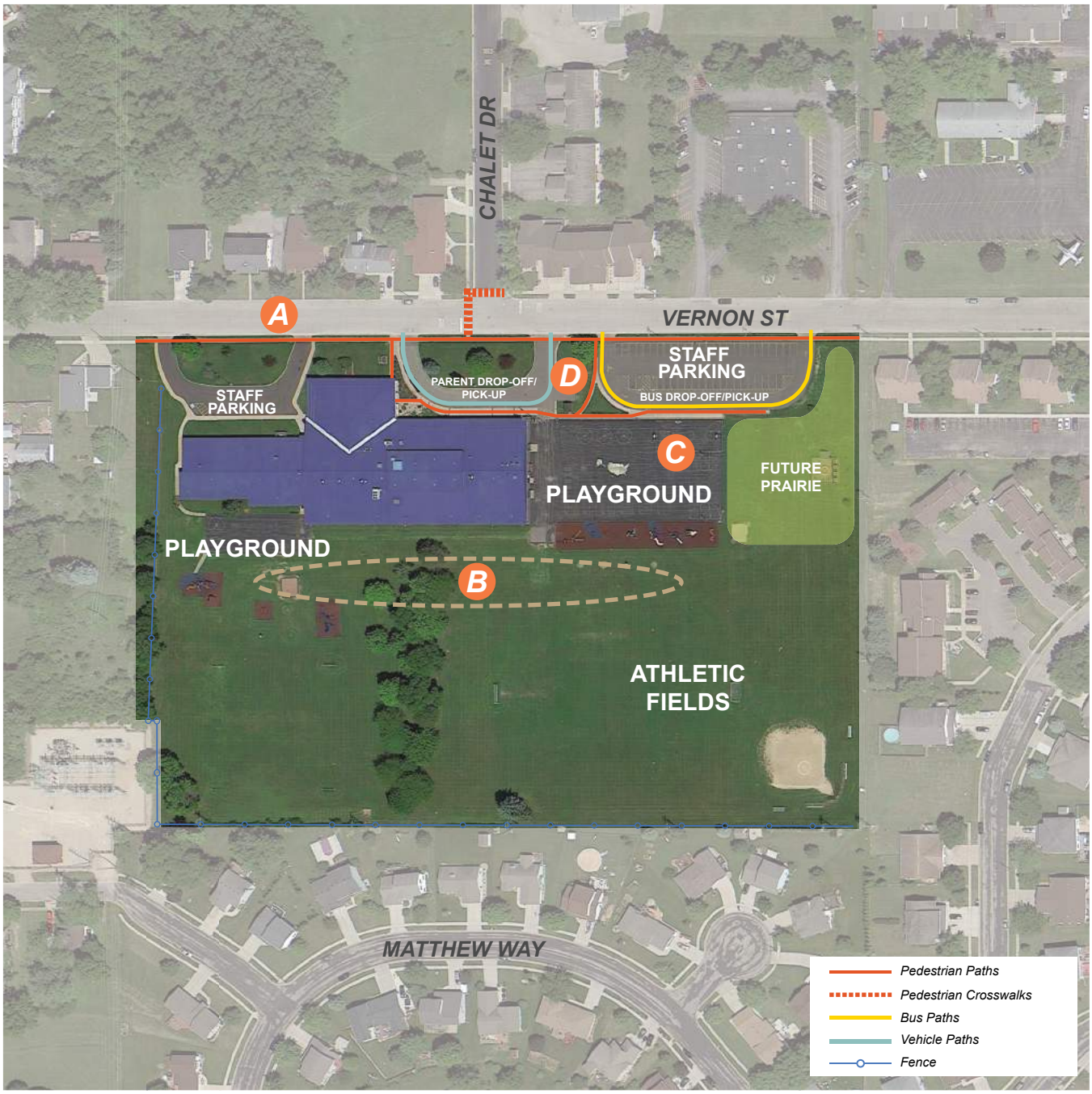
CRITERIA	OBSERVATION HIGHLIGHTS	EVALUATION
SITE	Site is generously sized with ample play structures and green space, and with a very large hardsurface playground area. Significant drainage issues, however, at time can restrict usability of green space. Parent pick-up and drop-off areas are separated from parking and bus areas, however there is insufficient queuing space for parents, which can create significant backups and congestion at the street.	FAIR
SAFETY	Exterior doors are locked, and visitor entry requires buzz in from office. However, once visitors are inside the building they have full access to the entire building and are not restricted to the office area. A security camera system is in place, and plans are currently underway to expand this system. Exterior doors are not electronically monitored, and classroom doors are not equipped with intruder hardware.	FAIR
SIZE & PROPORTION	Most classrooms are appropriately sized for large group classroom uses. Two kindergarten rooms are undersized for their current use, and lack typical amenities for kindergarten aged students.	FAIR
SPACE TYPE & ADJACENCY	Classrooms generally work well for large group and lecture uses. A few available classrooms are now used to serve as project and group space, however these spaces have not been re-designed to work well for these uses. Shared Gymnasium/Cafeteria space can create scheduling conflicts. Areas for specialists and special education in several cases have been adapted from standard classrooms, and are not designed for their current uses.	FAIR
EQUIPMENT & INFRASTRUCTURE	Wireless internet access is available througout the building. Classrooms are equipped with smart boards and chrome books are widely used. Electrical outlets are often in short supply. In some cases outdated chalkboards still need to be removed.	GOOD
FURNITURE	Furniture in parts of the building have been updated to be much more flexible and allow for easier configuration. Some older, less flexible furniture, however, remains. Flexible furniture can often play a key role towards encouraging student collaboration, project-based work, and other student-centered learning strategies.	FAIR
ENVIRONMENT	Learning spaces are generally well-maintained and in good shape. Recent paint schemes have brought some energy and life to the building, but overall building aesthetics can still feel somewhat institutional.	FAIR

KEY

GOOD	Most of criteria assessed was found to be acceptable and satisfied its purpose
FAIR	Some of the criteria assessed was found to be acceptable, while other criteria assessed was unacceptable and did not satisfy its purpose
POOR	Most of criteria assessed was found to be unacceptable and did not satisfy it's purpose

KEGONSA ELEMENTARY SCHOOL

SITE ASSESSMENT



Safety: Parent pick-up queuing along Vernon Street creates traffic flow and congestion concerns.

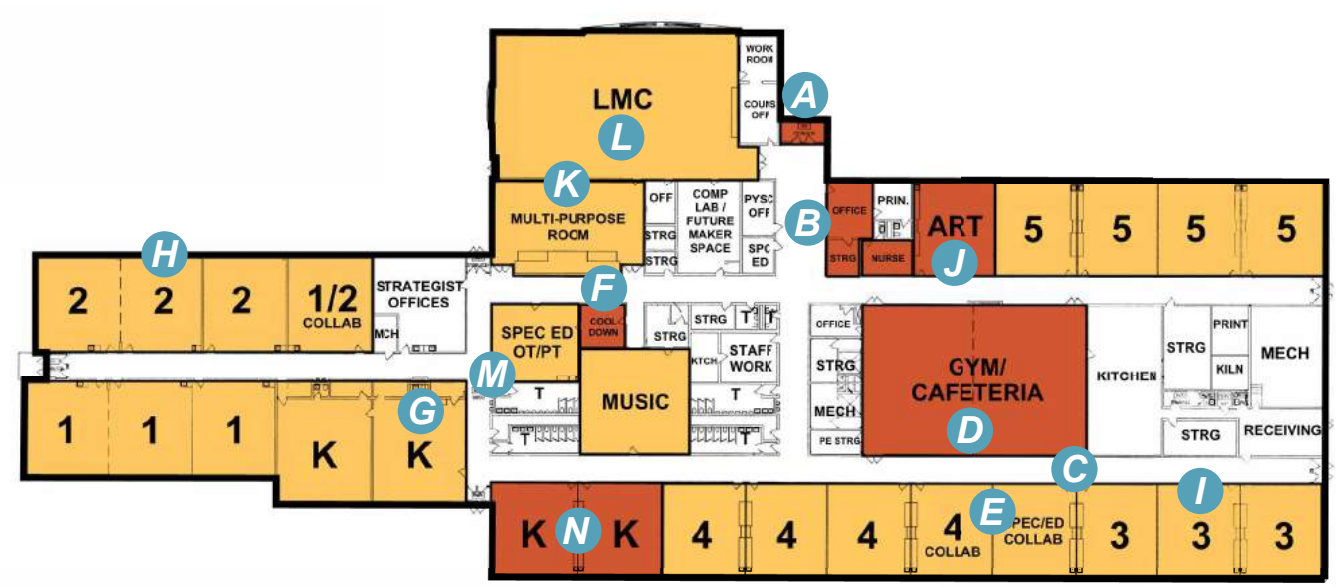
Site: Drainage swale along the south of the building collects excess water in the spring. West playground surface area becomes unusable.

Site: East hard-surface playground area is very large, which can create challenges for ongoing maintenance.

Site: Prominent dumpster location is visually unappealing, and separates parking areas from visitor entry.

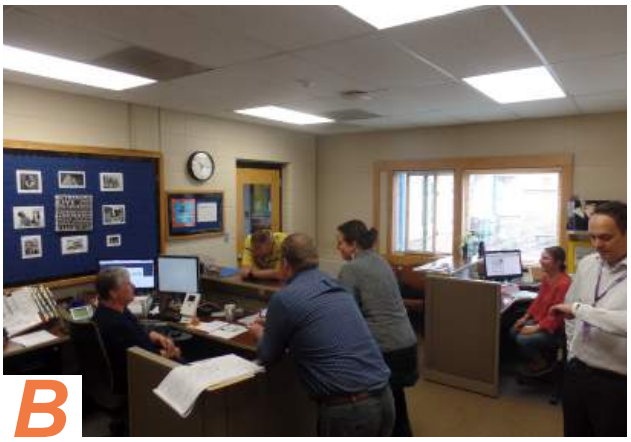
KEGONSA ELEMENTARY SCHOOL

FLOOR PLAN



A

Safety: The entrance sequence is not fully secured. Guests who are allowed entry into the building enter into the public corridor rather than a controlled office environment.



B

Size / Space Type and Adjacency: Main Office area is undersized. Nurse's desk is located in main office and is often confused for reception. There are no conference rooms. Reception area is undersized for visitors and students.

C

Safety / Space Type / Adjacency: Limited visual connectivity between corridors and classrooms. Current classrooms do not accomodate breakout spaces for group work.

D

Space Type and Adjacency: Shared gymnasium and cafeteria space creates scheduling conflicts. Turnover of space after lunch hour puts pressure on staff.

E

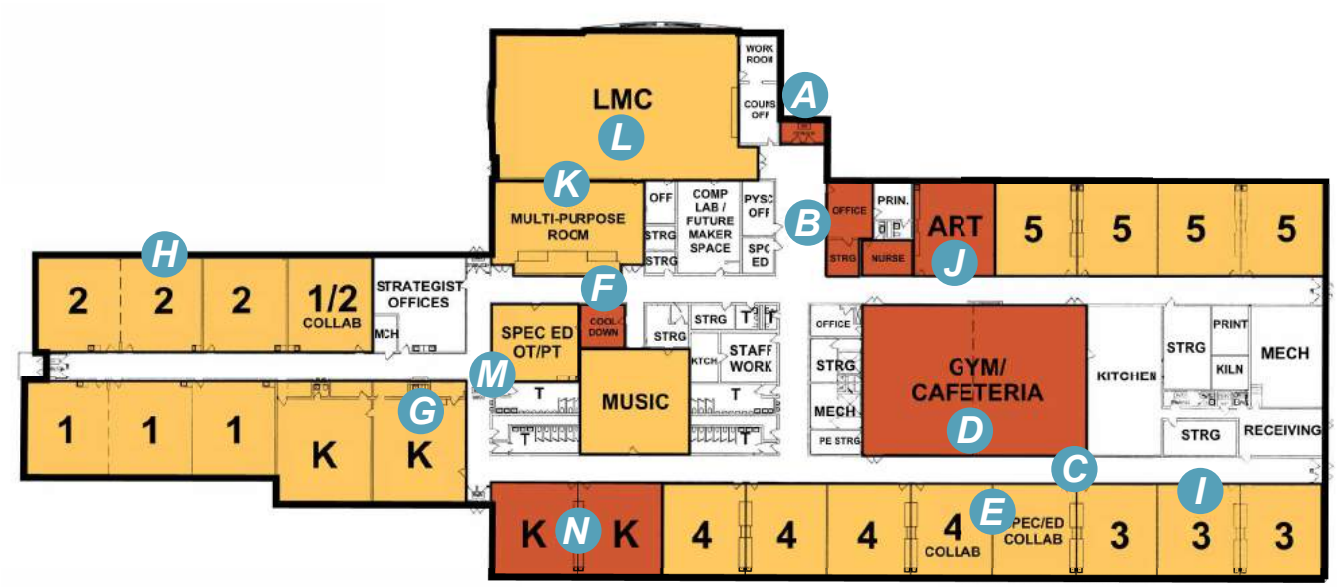
Space Type and Adjacency: Collaboration areas allow space for breakout work and group activities. Collaboration areas, however, are not visible from adjacent classrooms and can be difficult to supervise.

F

Environment: Cool down room lacks appropriate finishes and safety features for students who may need this space.

KEGONSA ELEMENTARY SCHOOL

FLOOR PLAN



G

Furniture: More flexible furniture has been purchased for portions of the building, but some older, less flexible furniture remains.

H

Environment: Some classrooms have dated wall coverings, chalkboards, and dry erase boards.

I

Technology: Each classroom has digital projection or electronic displays. Chromebooks are used and wireless internet is available throughout. Electrical outlets for charging devices, however are in short supply.

J

Size / Function/ Space Type/ Adjacency: Art rooms lack space for material storage and appropriate sinks for project cleanup. Kiln and some material storage are located remotely.

K

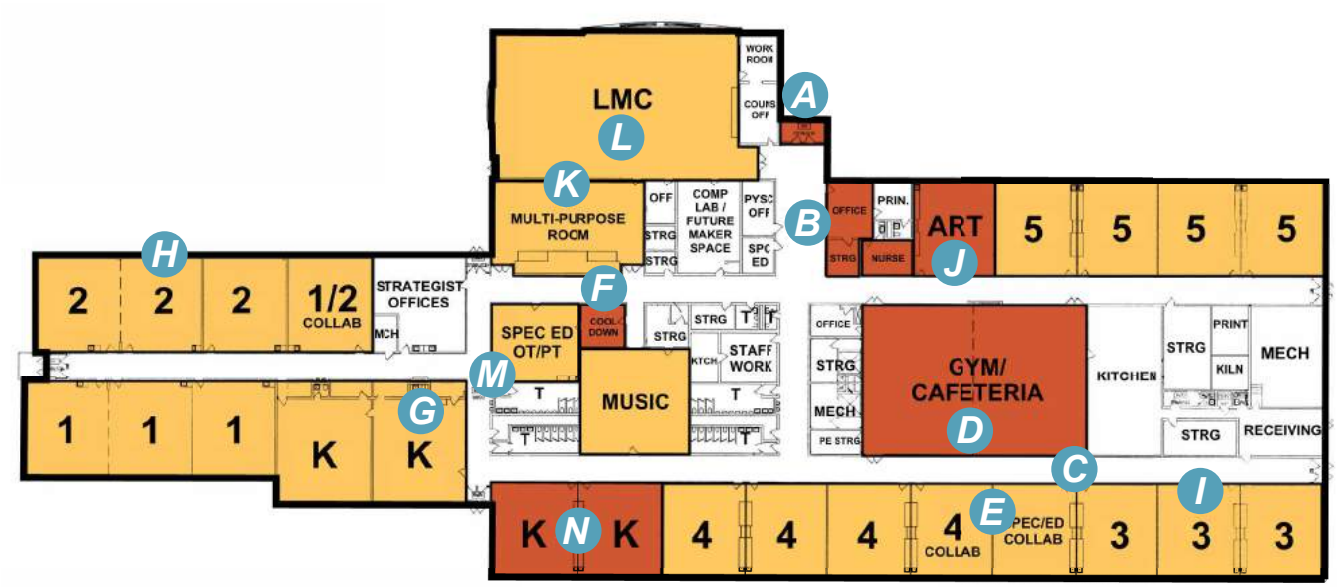
Space Type / Adjacency: Multi-purpose room provides space for large group motor activities, and professional development. Room is not visible from other areas, so the space must be staffed in order to be used by students.

L

Size / Proportion / Furniture: LMC is generously sized, but lacks ideal flexibility for collaboration, project-based work and group presentations.

KEGONSA ELEMENTARY SCHOOL

FLOOR PLAN



M

Space Type and Adjacency: OT/PT Room works well for intended uses, but other special education amenities are lacking. Including the need for sensory space, and a dedicated toilet room with a changing table.

N

Size / Space Type: Two kindergarten rooms occupy former standard classrooms. These rooms are undersized for kindergarten uses, and lack the in room storage and toileting typical with students of this age.

SANDHILL ELEMENTARY SCHOOL

EDUCATIONAL ADEQUACY ASSESSMENT SUMMARY

CRITERIA	OBSERVATION HIGHLIGHTS	EVALUATION
SITE	Site is generously sized with ample room for hard surfaced areas, play structures, and green space. Slope of site can create mild challenges, but is still very functional. Parent pick-up and drop-off areas are mostly separated from bus areas, but all vehicles enter and exit at one location, which can create congestion.	FAIR
SAFETY	Exterior doors are locked, and visitor entry requires buzz in from office. However, once visitors are inside the building they have full access to the entire building and are not restricted to the office area. A security camera system is in place, and plans are currently underway to expand this system. Exterior doors are not electronically monitored, and classroom doors are not equipped with intruder hardware.	FAIR
SIZE & PROPORTION	Most classrooms are appropriately sized for large group classroom uses. Kindergarten rooms are inconsistent in size and lack in-room toileting.	GOOD
SPACE TYPE & ADJACENCY	Classrooms generally work well for large group and lecture uses. Adjacent spaces in the core of the building allow for breakout groups and interventions to occur adjacent to classrooms. Additional transparency or openness could further enhance these opportunities.	GOOD
EQUIPMENT & INFRASTRUCTURE	Wireless internet access is available throughout the building. Classrooms are equipped with smart boards and Chromebooks are widely used. Electrical outlets at times can be in short supply.	GOOD
FURNITURE	Furniture in parts of the building have been updated to be much more flexible and allow for easier reconfiguration. Some older, less flexible furniture, however, remains. Flexible furniture can often play a key role towards encouraging student collaboration, project-based work, and other student-centered learning strategies.	FAIR
ENVIRONMENT	Learning spaces are generally well-maintained and in good shape, but overall building aesthetics can feel somewhat institutional. Building formally served as a middle school, and environment can feel more appropriate for older students than for current ages served.	FAIR

KEY

GOOD	Most of criteria assessed was found to be acceptable and satisfied its purpose
FAIR	Some of the criteria assessed was found to be acceptable, while other criteria assessed was unacceptable and did not satisfy its purpose
POOR	Most of criteria assessed was found to be unacceptable and did not satisfy it's purpose

SANDHILL ELEMENTARY SCHOOL

SITE ASSESSMENT

A

Safety / Site: Bus, vehicle, and pedestrian traffic all bottleneck at single access point to school site. This creates queueing and safety issues.

B

Site: The parent drop-off area has limited queueing space. Cars of parents to pick-up their child back-up into the parking lot circulation.

C

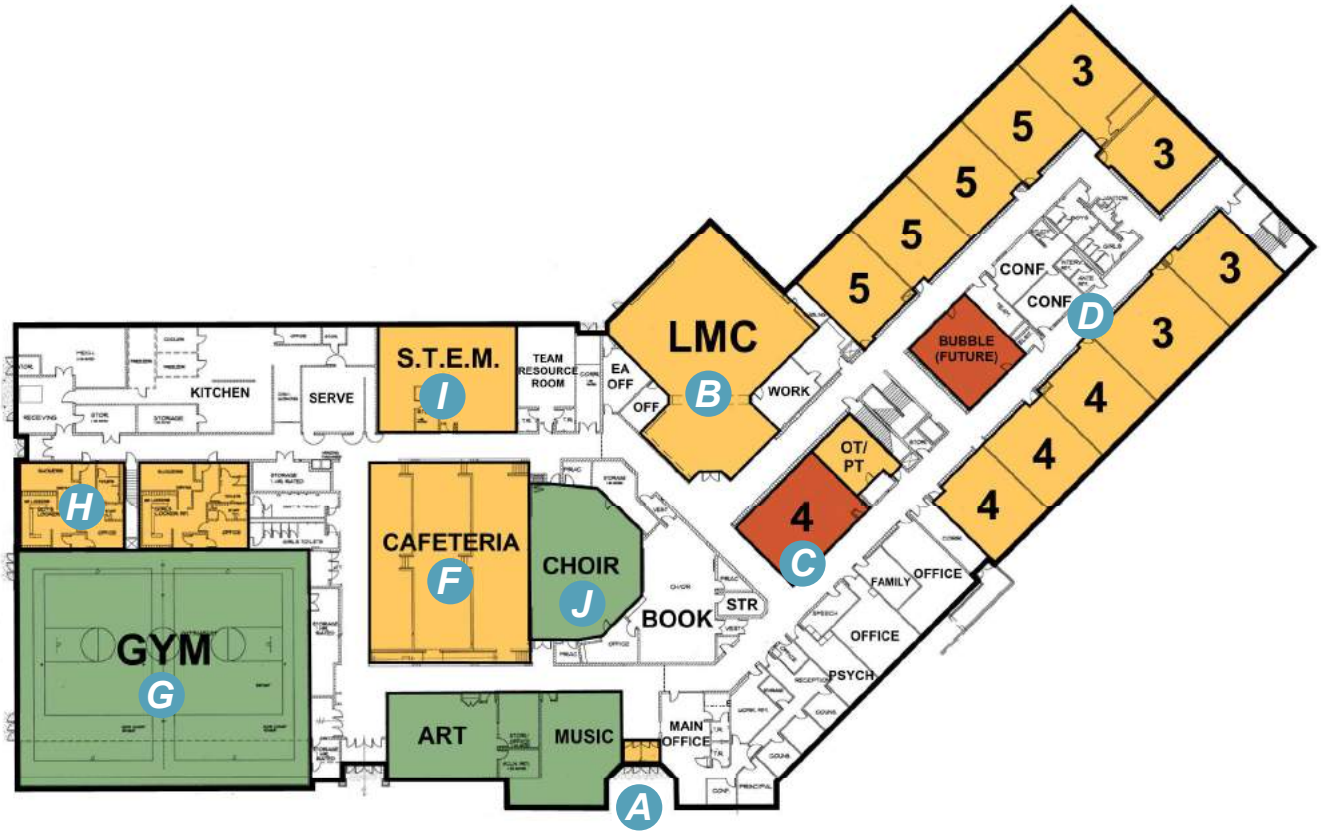
Safety: The playground is open to a large field on the west side of the site. Fencing is desired to limit the possibility of children entering the field.

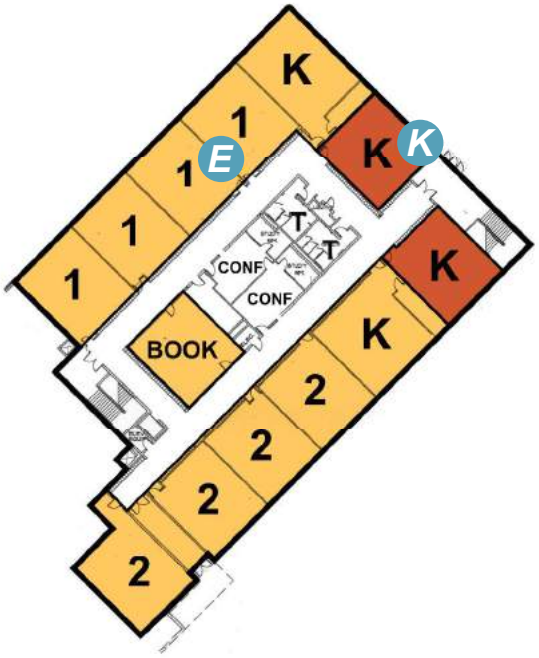
D

Safety / Site: There is no parking adjacent to the athletic fields. Cars park along the access drive. This creates congestion and visibility concerns.

SANDHILL ELEMENTARY SCHOOL

FLOOR PLAN





A

Safety: The entrance sequence is not fully secured. Guests who are allowed into the building enter into the public corridor rather than a controlled office environment.

B

Size / Proportion / Furniture: LMC is generously sized, but lacks ideal flexibility for collaboration, project-based work and group presentations.

C

Environment: Classrooms at the core of the building have no access to daylight.

D

Safety / Space Type / Adjacency: Resource areas are located adjacent to primary learning classrooms, but lack of visual connectivity limits their usefulness for classroom related breakout or project-based learning.

E

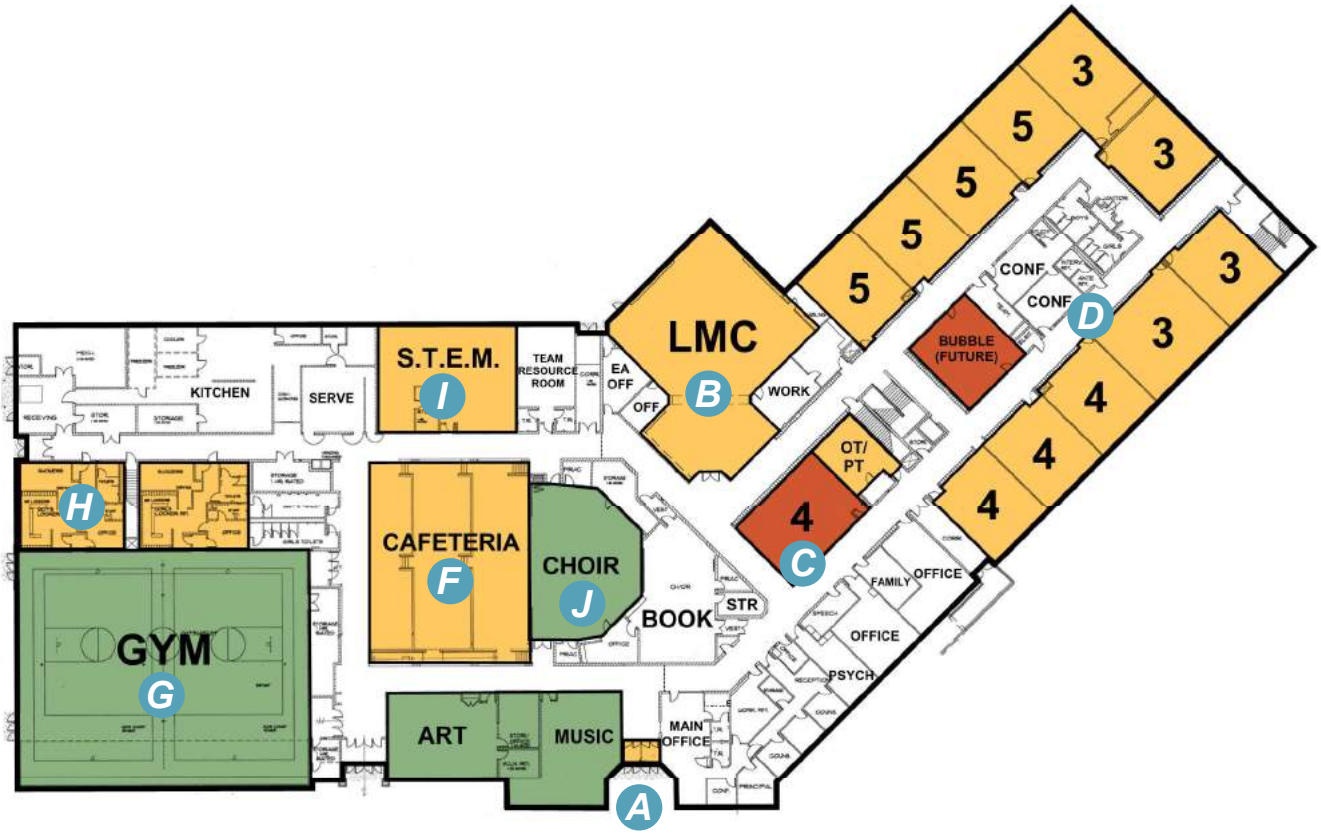
Furniture: Various classrooms have furniture which is too heavy or bulky to reconfigure. This limits the flexibility in how the classroom can be used.

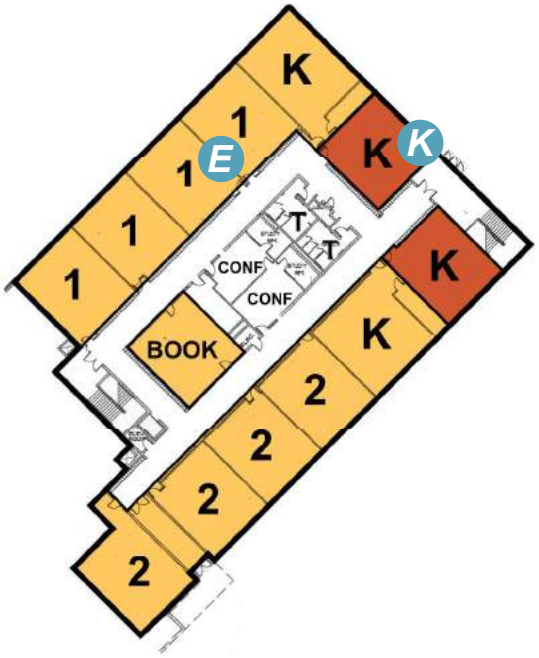
F

Furniture / Space Type: Tiered levels for performance viewing limit opportunities for space to be used for other functions. Furniture also lacks flexibility for other uses.

SANDHILL ELEMENTARY SCHOOL

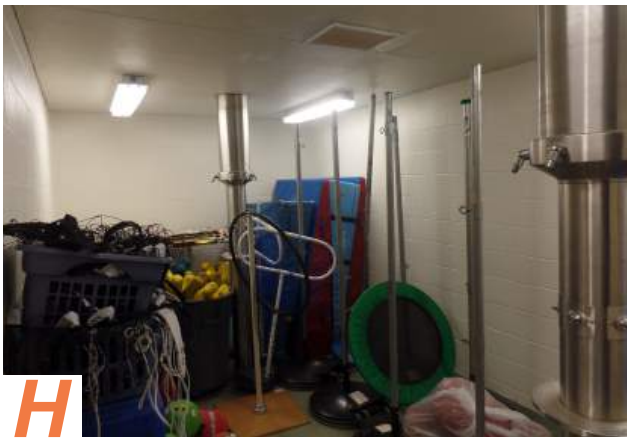
FLOOR PLAN





G

Space Type / Adjacency: Dedicated Gymnasium is an amenity that other elementary schools do not have. Gym serves as a district wide resource.



H

Space Type / Adjacency: Former Middle School Locker Rooms are not needed for elementary school and are used primarily as storage. Space could be redesigned for greater efficiency.

I

Space Type / Adjacency: S.T.E.M. resource room occupies a former Home Ec room. Casework and equipment is not ideal for current use, but this is an amenity other elementary schools do not have.

J

Space Type / Adjacency: Stage / Choir Room is an amenity that other elementary schools do not have.

K

Space Type / Adjacency: Kindergarten Classrooms vary in size and amount of storage space. In-room toileting is not available in any of the rooms.

RIVER BLUFF MIDDLE SCHOOL

EDUCATIONAL ADEQUACY ASSESSMENT SUMMARY

CRITERIA	OBSERVATION HIGHLIGHTS	EVALUATION
SITE	Site is very tight. Outdoor space available for PE and recess is limited. Staff parking is shared between the school and the administration building, and often fills up. Parent pick-up and drop-off routes cross bus pick-up and drop-off routes, and students who walk cross paths with vehicles creating congestion and safety concerns.	POOR
SAFETY	The building lacks a secure main entry. The main office location requires the use of a secondary welcoming station to monitor visitors. A security camera system is in place, and plans are currently underway to expand this system. The building also lacks visual connection between learning spaces and adjacent common areas, limiting visual supervision of students outside of the classroom.	FAIR
SIZE & PROPORTION	Most classrooms are appropriately sized for large group classroom uses. Gymnasium is undersized, requiring students to use Community gymnasium facilities across the street. Corridors and stairways become congested during passing times. There are few restroom options available for students with privacy concerns.	FAIR
SPACE TYPE & ADJACENCY	Classrooms generally work well for large group and lecture uses. However, there is little space available outside the primary classroom for breakout group work, collaboration, or personalized interventions. Areas for specialists and special education in several cases have been adapted from standard classrooms and are not designed for their current uses. There is limited space available for Occupation and Physical Therapy, or for other sensory integration spaces when needed for I.E.P.'s.	FAIR
EQUIPMENT & INFRASTRUCTURE	Wireless Internet access is available throughout the building. Classrooms are equipped with smart boards and chrome books are widely used. Electrical outlets at times can be in short supply.	GOOD
FURNITURE	Most classrooms use tables and chairs to facilitate group work and collaboration, however, some older sled desks are still in use. Lighter weight, more flexible furniture would further enhance flexibility for student collaboration, project-based work, and other student-centered learning strategies. Furniture upgrades are underway.	FAIR
ENVIRONMENT	Learning spaces are generally well-maintained and in good shape. Some classrooms, however, lack access to natural light, and overall the building finishes can feel somewhat institutional.	FAIR

KEY

GOOD	Most of criteria assessed was found to be acceptable and satisfied its purpose
FAIR	Some of the criteria assessed was found to be acceptable, while other criteria assessed was unacceptable and did not satisfy its purpose
POOR	Most of criteria assessed was found to be unacceptable and did not satisfy it's purpose

RIVER BLUFF MIDDLE SCHOOL

SITE ASSESSMENT

A

Site: The Middle School lacks any sense of presence since it is tucked behind the administration building. Visitors unfamiliar with the site struggle to find the building.

B

Site: Parking for the Middle School is shared between the Administration Building. There is not enough space in the parking lot for all staff. Staff members are forced to find parking along the street.

C

Site / Safety: Poor traffic circulation leads to significant congestion. Many parents choose to drop students off on North Street or further away. This leads to pedestrian traffic on busy streets with limited visibility due to parked cars.

D

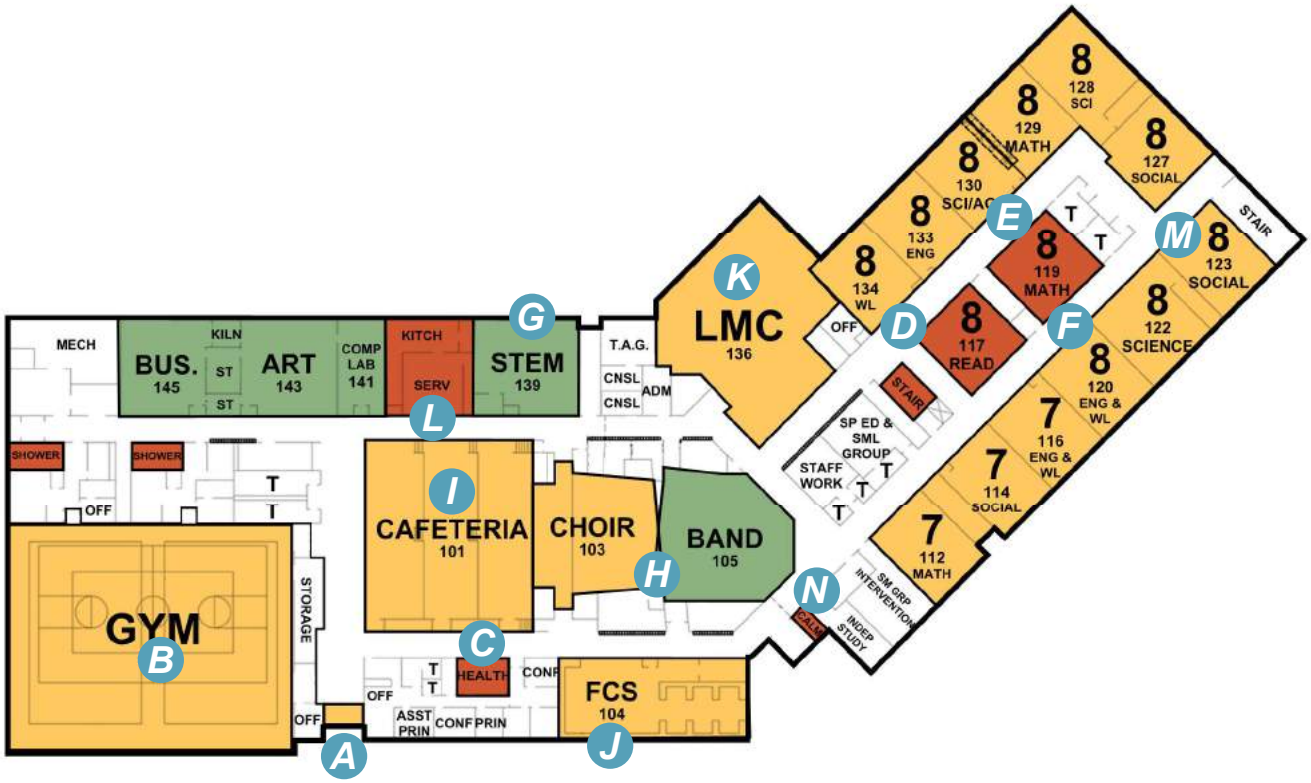
Site: The site constraints offer limited space for outdoor activities. Gym classes often use the only open field which leaves few options for students during their lunch recess.

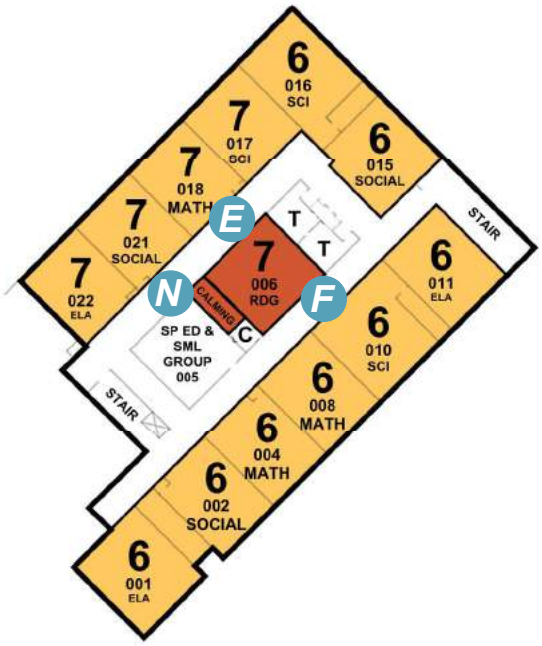
E

Site / Safety: Both buses and parent vehicular traffic exit out 4th Street, creating a traffic bottleneck. Pedestrian traffic also approaches and crosses 4th Street. Maintenance traffic on North Street further complicates the situation.

RIVER BLUFF MIDDLE SCHOOL

FLOOR PLAN



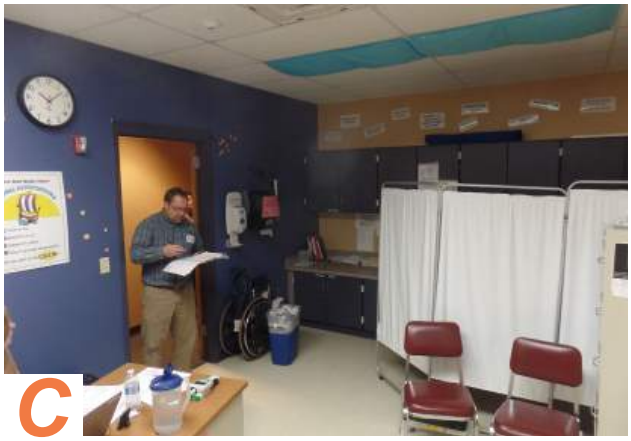


A

Safety: The entry sequence is not fully secured. Guests who are allowed entry into the building enter into the public corridor rather than a controlled office environment.

B

Size / Space Type / Adjacency: The gymnasium is not large enough to serve all P.E., recess, and athletic needs. The Middle School is dependent on the Community Gymnasium (Armory) for gym and fitness space.



C

Size and Proportion: Health room is only large enough to fit one cot. There is no bathroom adjacent to the health room.

D

Size and Proportion: Hallways and central open stair become congested during passing times.

E

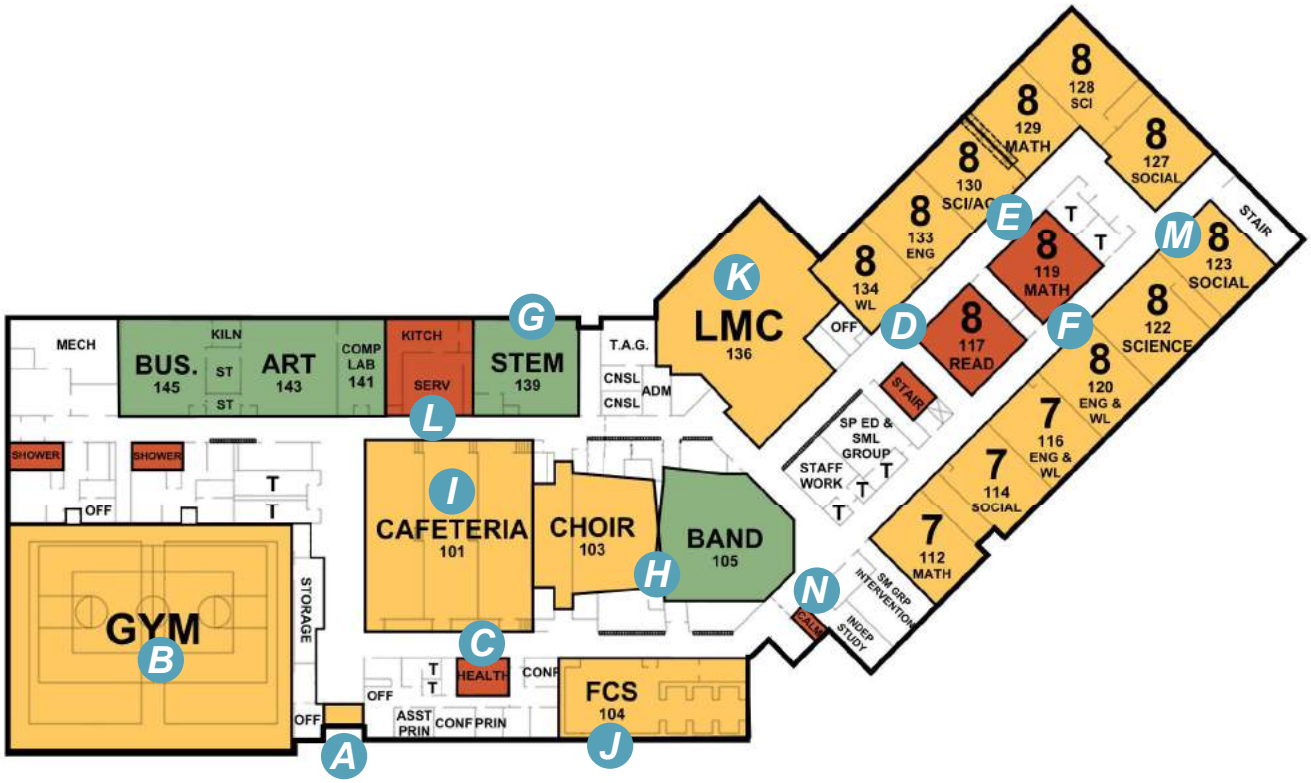
Environment: Classrooms at the core of the building have no access to daylight.

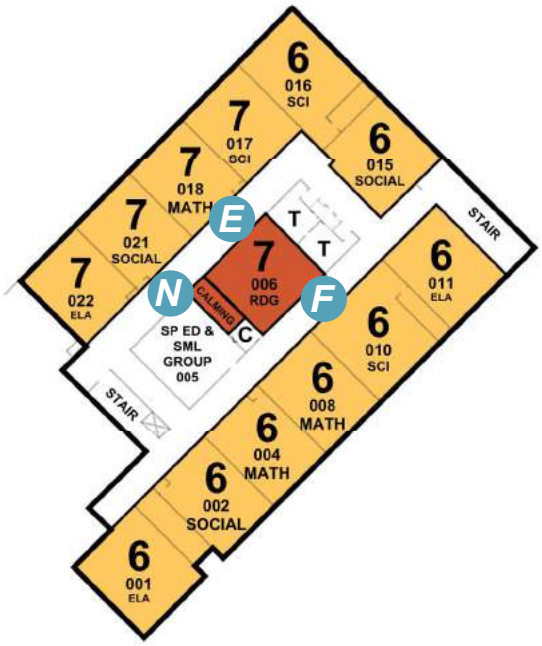
F

Safety / Space Type / Adjacency: Limited visual connectivity between corridors and classrooms. Current classrooms do not accomodate breakout spaces for group work.

RIVER BLUFF MIDDLE SCHOOL

FLOOR PLAN





G

Space Type: STEM room provides adequate space and equipment for project-based learning.

H

Size / Proportion/ Space Type: Orchestra/Choir room is generously sized, but the activities share a space. This is a functional arrangement, but is not ideal for either activity.

I

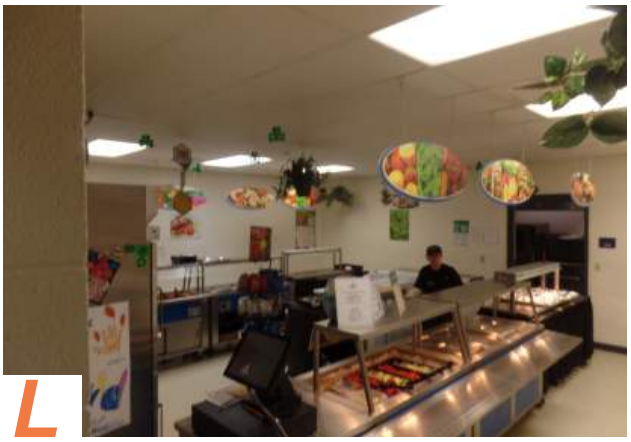
Furniture / Space Type: The tiered level of the cafeteria works for performance viewing, but this use rarely occurs, and flexibility for cafeteria/commons use is limited. Furniture also lacks flexibility for other uses.

J

Size / Equipment / Environment: FCS is generously sized, and houses both food service and sewing (design) classes. Food service equipment is outdated and of residential grade. Space lacks ideal flexibility for multiple uses.

K

Environment: LMC lacks ideal flexibility for collaboration, project-based work, and group presentations. Furniture updates are underway to address some of these concerns.

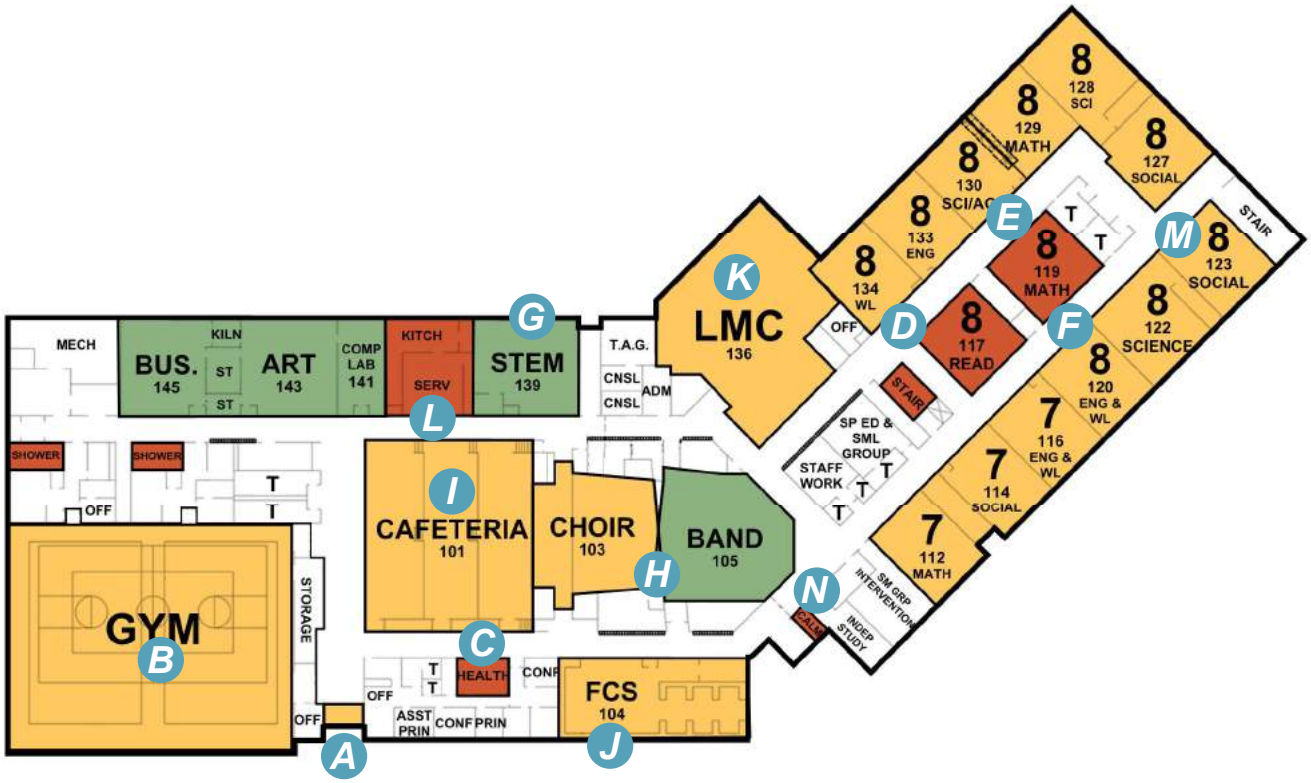


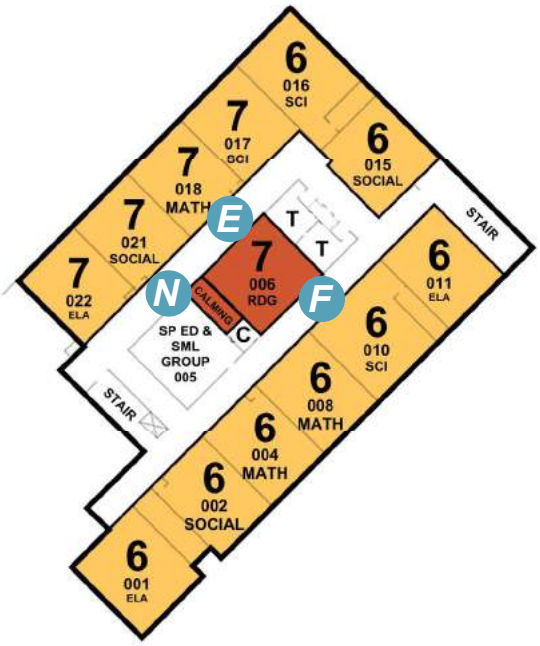
L

Size and Proportion: Kitchen and Food Services areas are undersized. Circulation in and out of service areas can create significant congestion.

RIVER BLUFF MIDDLE SCHOOL

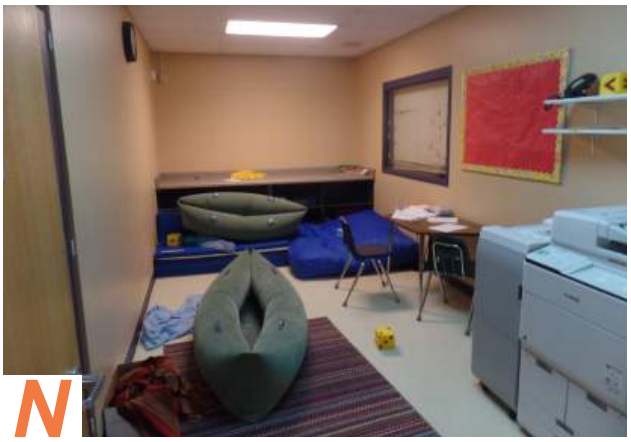
FLOOR PLAN





M

Furniture: Various classrooms have furniture which is too heavy or bulky to reconfigure. This limits the flexibility in how the classroom can be used.



N

Space Type and Adjacency: A dedicated area for calming students with emotional needs is needed on each floor. Neither room offers adequate sound separation, and the lower level room also houses a copy machine, which limits its effectiveness.

STOUGHTON HIGH SCHOOL

EDUCATIONAL ADEQUACY ASSESSMENT SUMMARY

CRITERIA	OBSERVATION HIGHLIGHTS	EVALUATION
SITE	High School site is functional, but somewhat limited in size. JV baseball and softball fields are located off site. Stadium is too narrow for competition soccer, and does not have accessible seating on the home side. Parking is also limited, with too few parking spaces for all student drivers and for events. Buses and parent/student traffic are not completely separated.	FAIR
SAFETY	Exterior doors are locked, and visitor entry requires buzz in from office. Visitors enter directly into office through a secure vestibule. A security camera system is in place, and plans are currently underway to expand this system. Exterior doors are not electronially monitored, and classroom doors are not equipped with intruder hardware.	FAIR
SIZE & PROPORTION	Classroom sizes are inconsistent in size, with many undersized for the number of students served. Commons/Food Service areas are undersized and do not support student-centered learning activities.	POOR
SPACE TYPE & ADJACENCY	Classrooms are configured for large group and lecture areas. There is little space available outside classrooms for breakout group work, collaboration, or personalized interventions. Areas for specialists and special education are limited, with few resource areas available. There is no dedicated space for Occupational and Physical Therapy. There are few restroom options available for students with privacy concerns.	POOR
EQUIPMENT & INFRASTRUCTURE	Wireless Internet access is available throughout the building. Classrooms are equipped with projectors or digital displays, and chrome books are widely used. Casework and Equipment for science labs and other specialty classroom is somewhat outdated.	GOOD
FURNITURE	Most classrooms use tables and chairs to facilitate group work and collaboration. Lighter weight, more flexible furniture would further enhance flexibility for student collaboration, project-based work, and other student-centered learning strategies.	FAIR
ENVIRONMENT	Learning spaces are generally well-maintained and in good shape. Many classrooms, however, lack access to natural light, and overall the building finishes can feel somewhat institutional.	FAIR

KEY

GOOD	Most of criteria assessed was found to be acceptable and satisfied its purpose
FAIR	Some of the criteria assessed was found to be acceptable, while other criteria assessed was unacceptable and did not satisfy its purpose
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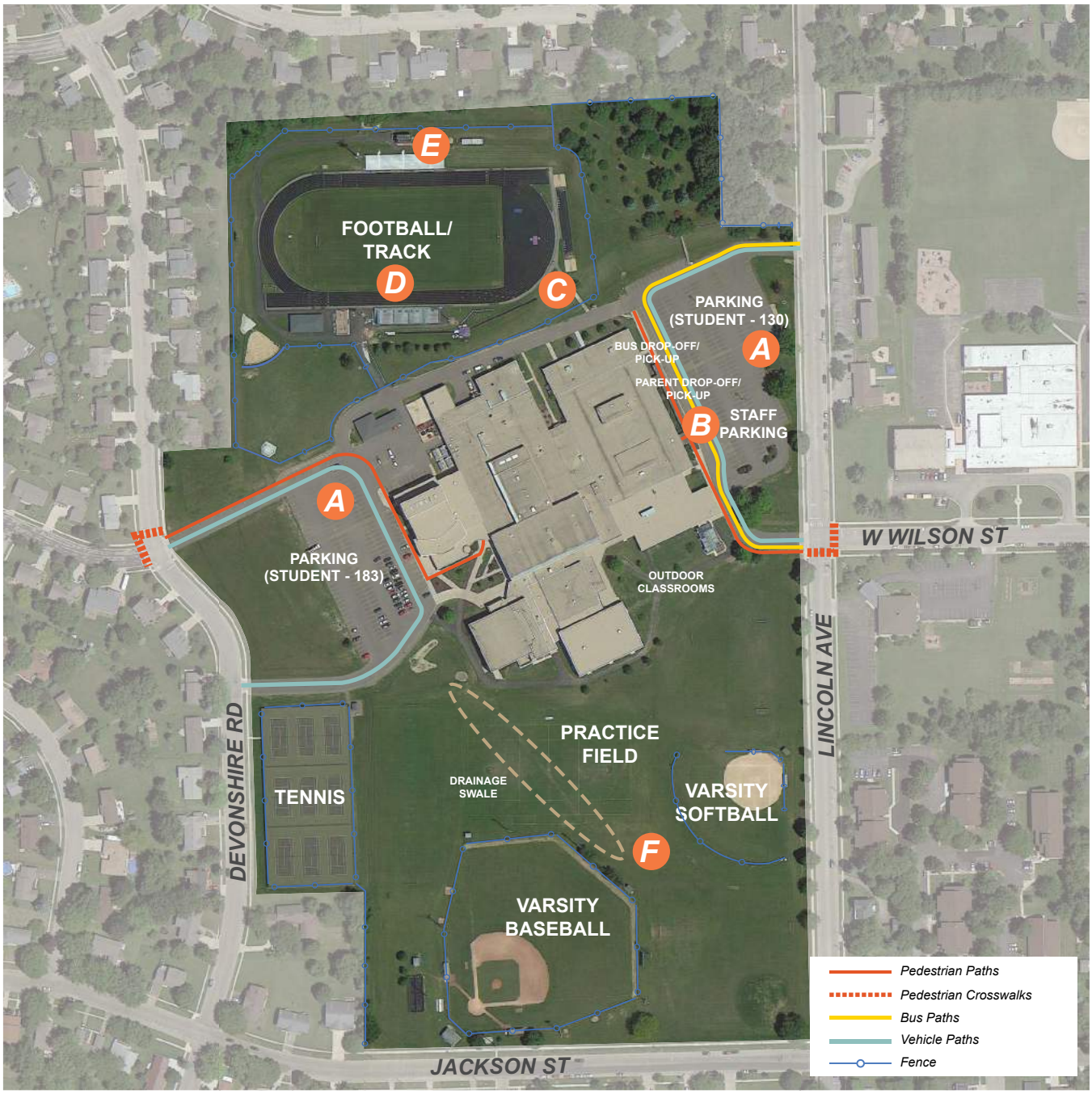
STOUGHTON HIGH SCHOOL

SITE ASSESSMENT



A

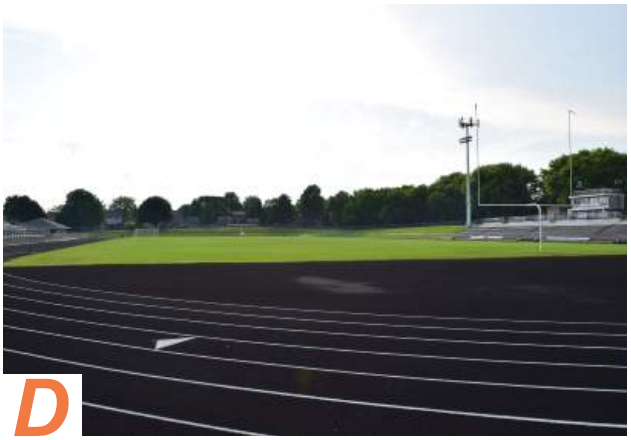
Site/Safety: Current parking lots do not provide adequate parking for student drivers. Students are forced to park along nearby street which impacts visibility at adjacent intersections.

B

Site/Safety: Bus loading zone and parent drop-off area share same drive. This creates congestion when buses are waiting to load and vehicles queue in front of school.

C

Site: The stadium's east entry and home bleachers are not accessible to those in wheelchairs.



D

Site: Stadium soccer field is narrower than desired for competition soccer. A new track configuration would be necessary to increase the field width.

E

Site: The stadium press box is in need of replacement. Pressbox does not function properly with home and visiting teams sharing the space.

F

Site: The high school site only has enough field space for varsity athletics. JV baseball and JV softball games are held at different district sites.

STOUGHTON HIGH SCHOOL

FLOOR PLAN

A

Space Type and Adjacency: Main Office, Attendance Office, and Student Service Areas were not designed for current staff levels. Student Services is in need of a more student-centered career center, and all spaces could be redesigned for better efficiency and use.

B

Environment: Many core classrooms lack access to natural light.

C

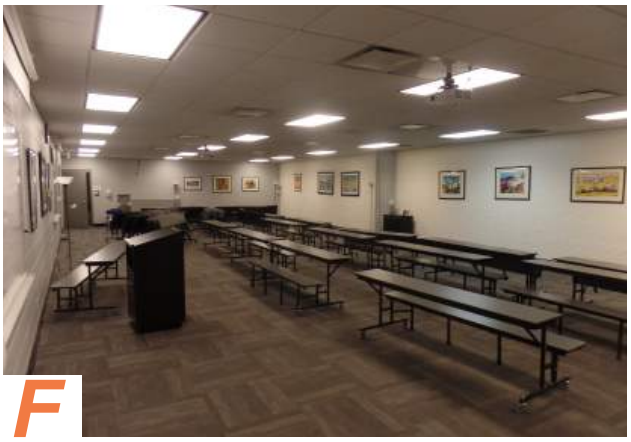
Size and Proportion: Core classrooms are inconsistently sized, with many significantly smaller than what would be recommended for the number of students served.

D

Safety / Space Type / Adjacency: Limited visual connectivity between corridors and classrooms. Current classrooms do not accomodate breakout spaces for group work.

E

Space Type / Adjacency / Furniture / Environment: LMC lacks ideal flexibility for collaboration, project-based work, and group presentations. Functions more as a tradtional library than as a student-centered information commons.



F

Space Type and Adjacency: Multi-purpose room furniture limits flexibility of space for alternate uses. Isolation from classrooms does not allow room to be used for breakout activities.

STOUGHTON HIGH SCHOOL

FLOOR PLAN

G

Furniture / Space Type: Small Cafe is isolated from the rest of the school and functions as dining room as opposed to a student union function which would be desired for high school students.

H

Furniture / Space Type: The tiered levels and furniture in the cafeteria restrict flexibility, and the stage is rarely used. The space functions as a cafeteria as opposed to a student union or commons space that would be more typical for high school aged students.

I

Safety / Space Type / Adjacency: Limited visual connectivity between corridors and classrooms. Current classrooms do not accomodate breakout spaces for group work.

J

Space Type / Adjacency / Size: Varsity Gym is used for competitions, practice, and P.E. Locker rooms are no longer functioning for today's needs and need to be reconfigured for use and privacy.

K

Space Type / Adjacency / Size: Weight Room was converted from former pool, and is very generously sized.

L

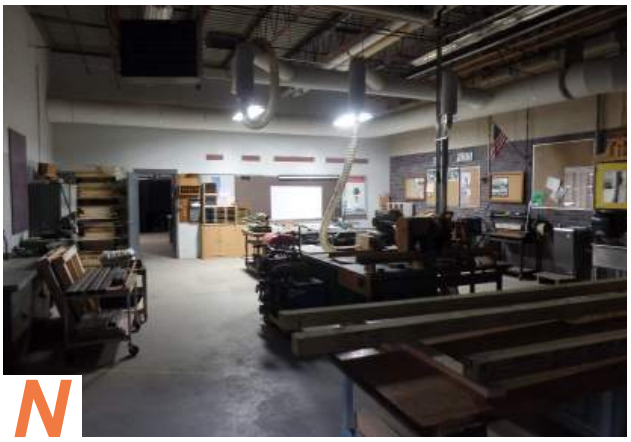
Space Type / Adjacency: Pool Addition (2003) and Fieldhouse (1997) serve the district well for their intended uses.

STOUGHTON HIGH SCHOOL

FLOOR PLAN

M

Space Type / Adjacency / Size: Music Suite is generously sized and proximity to auditorium works well for performances.



N

Space Type / Adjacency: CTE (Woods, Autos, Welding) are well equipped for traditional tech ed classrooms, but are fairly isolated from each other and do not support cross disciplinary project work.

O

Space Type / Adjacency / Size: Instructional Health Room and adjacent Special Education Facilities are in the middle of the CTE wing of the school and remotely located from other like functions. Rooms are also undersized.

P

Equipment / Environment: Food service calculation and flow is congested. Food service delivery model is more cafeteria style as opposed to desired student union model.

YAHARA

EDUCATIONAL ADEQUACY ASSESSMENT SUMMARY

CRITERIA	OBSERVATION HIGHLIGHTS	EVALUATION
SITE	Stoughton Area School District rents out the former Yahara Elementary School Site to Martin Luther Christian School and Pumpkin Patch Preschool. The site is still utilized by SASD for JV Softball and for gymnasium space. The site has adequate room for parking, playfields, and playgrounds based on its current uses. Separate drives on each side of the school could be used to separate bus and parent traffic if so desired.	GOOD
SAFETY	SASD Gymnasium can be locked off from Martin Luther Christian School for security purposes and after hours use. MLCS office is located in the center of the building which creates challenges for supervision of visitors. Doors are not monitored electronically, and classrooms are not equipped with intruder function hardware.	POOR
SIZE & PROPORTION	Classroom sizes are somewhat inconsistent, but are generally sufficient for large group classroom instruction. Library is generously sized and is currently underutilized. Gym and Cafeteria share a single space.	FAIR
SPACE TYPE & ADJACENCY	Classrooms are configured for independent large group use, however there the media center would be reconfigured to serve as breakout/resource space for many of the classrooms. There is no available breakout space for Pumpkin Patch wing classrooms.	FAIR
EQUIPMENT & INFRASTRUCTURE	Classroom Technology and infrastructure appears to be limited in most of the building. Most classrooms do not have digital displays, and many are still relying on chalkboards. Wireless Technology is not present (confirm).	POOR
FURNITURE	Classrooms utilize tables and chairs to facilitate small group work and flexible learning. Furniture is property of MLCS and appears to be various ages.	FAIR
ENVIRONMENT	The environment is functional but dated. Many of the finishes are beginning to show their age and feel worn. Several rooms lack natural light.	POOR

KEY

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FAIR	Some of the criteria assessed was found to be acceptable, while other criteria assessed was unacceptable and did not satisfy its purpose
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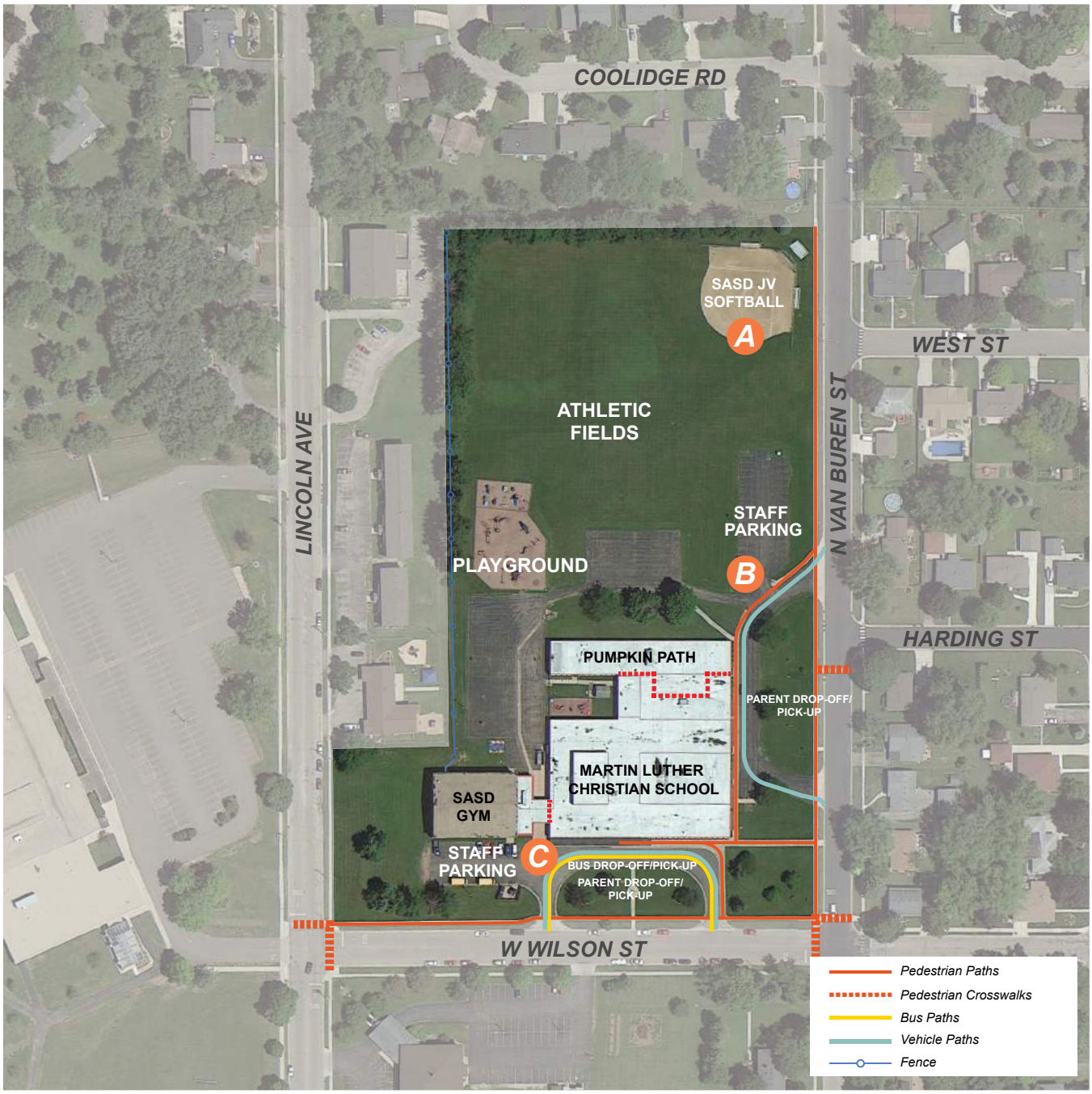
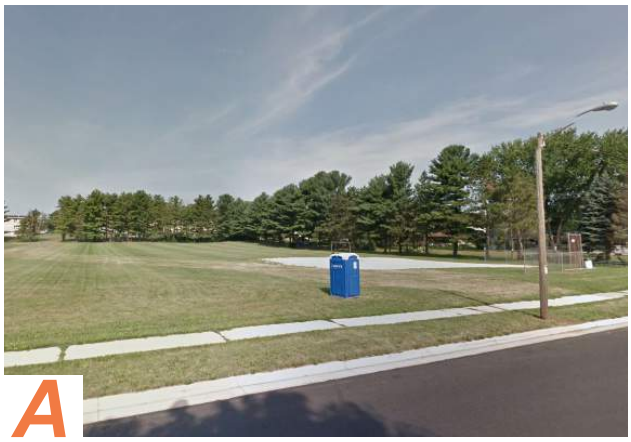
YAHARA

SITE ASSESSMENT





A

Site: SASD JV Softball is located on this site.

B

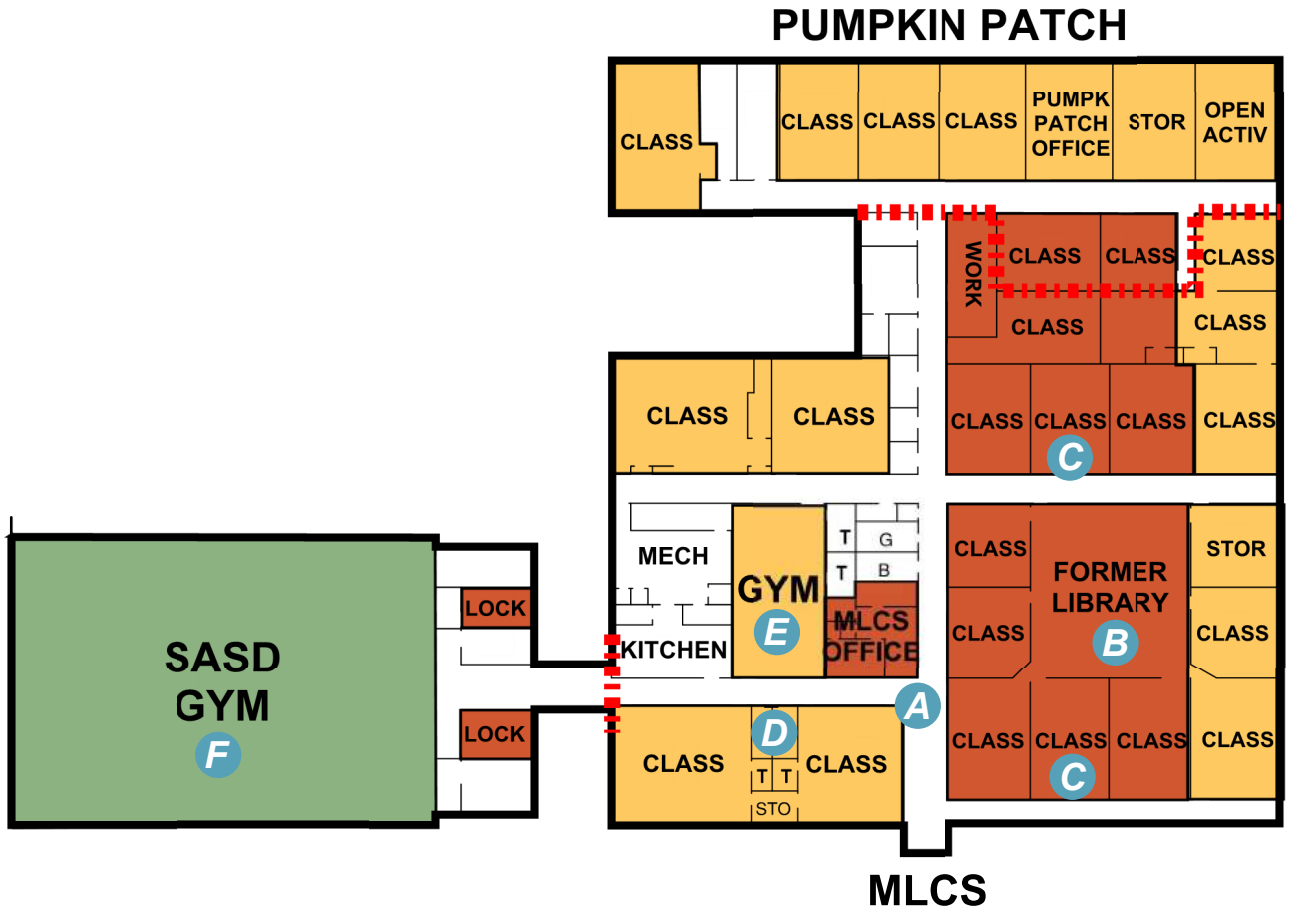
Site: There is sufficient room for green space, playgrounds, and parking on site.

C

Site: SASD Gym has dedicated entrance and parking available nearby.

YAHARA

FLOOR PLAN



A

Safety: The entrance sequence is not secure. Guests who are allowed entry into the building enter into the public corridor rather than a controlled office environment.

B

Space Type / Adjacency / Environment: The library is no longer being used in this capacity and is underutilized. Finishes are dated and worn.

C

Environment: Several rooms lack access to natural light. Finishes are dated and worn.

D

Space Type and Adjacency: Rooms 1 and 2 were designed as kindergarten rooms and are only classrooms with in-room toileting and storage closets.

E

Space Type and Adjacency: Cafeteria and Gymnasium share one space for MLCS.

F

Space Type and Adjacency: SASD Gym provides needed gym space for the school district. Locker rooms are no longer needed and are currently used for storage.

HISTORIC 1892 ADMINISTRATION BUILDING

EDUCATIONAL ADEQUACY ASSESSMENT SUMMARY

CRITERIA	OBSERVATION HIGHLIGHTS	EVALUATION
SITE	The site for the historic administration building is shared between River Bluff Middle School and the current Administration Building. This site is very restricted already without additional pressure from this building. Challenges are detailed in the River Bluff Middle School Assessment.	POOR
SAFETY	In its current state, safety is a major concern. Egress, accessibility, fire protection measures, and other safety features would need to be addressed for any viable reuse of the space.	POOR
SIZE & PROPORTION	Classroom sizes are too small for large group instructional standards. Any redesign of the space would have to consider uses for small-group based instruction.	POOR
SPACE TYPE & ADJACENCY	Classrooms are configured around a central core. Because the structure is load-bearing masonry, creating transparency and interconnectivity between spaces would be challenging but not entirely impossible.	POOR
EQUIPMENT & INFRASTRUCTURE	All equipment and all infrastructure would need complete replacement if this building were to be used again.	POOR
FURNITURE	If the buiding were to be used again, all furniture would need to be purchased or relocated from elsewhere.	POOR
ENVIRONMENT	In its current state, the building is in serious disrepair. If the building were to be carefully renovated, there is potential to create an environment that could be unique and interesting.	FAIR

KEY

GOOD	Most of criteria assessed was found to be acceptable and satisfied its purpose
FAIR	Some of the criteria assessed was found to be acceptable, while other criteria assessed was unacceptable and did not satisfy its purpose
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HISTORIC 1892 ADMINISTRATION BUILDING
OVERVIEW

Stoughton Area School District owns a historic school building that has been vacant since 1997. The building was last used as administrative offices for the district. It also served as a junior high school prior to construction of River Bluff in the early 1980's. The building was originally constructed in 1892 as a secondary school. It is designated as a local landmark and listed on both the State Register and National Register of Historic Places. It is purported to be one of the first schools in Wisconsin to be used as a high school.

The facility appears to be in relatively sound structural condition, but its interior partitions and interior finishes are in complete disrepair. Any reuse of the facility would require a complete gut and remodel job with new insulation, waterproofing, interior partitions, electrical, mechanical, plumbing, and accessible elevator service.

The physical structure of the building consists of two main floors with a basement and a partial attic space. The basement formerly housed students, but has stormwater infiltration concerns, and likely does not have enough headroom to allow for reuse of the space for students in the future. The first floor is partitioned into two primary classroom spaces, and two office-sized spaces which all open to a central hall. Both classrooms are undersized by today's educational standards at roughly 650 square feet. The second floor houses one large classroom at approximately 900 square feet and two smaller classrooms similar to those on the first floor. Only the large second floor classroom is sufficiently sized to serve as a standard classroom by today's standards.

Between the first and second floor, the structure consists of approximately 3500 square feet of programmable space. If the building were to be re-used, a traditional school use is likely not feasible as classroom sizes are too small. Office space or non-traditional small group based alternative education programs would be much more appropriate should the need for this type of space arise. Because the building is a stand-alone facility, any student use of the building would ideally be as part of a stand-alone program. Costs of reusing this space would require further investigation, but are likely to be very high.

A

Site/Safety: Site is shared with River Bluff Middle School and the current Administration Building. Site is already tight for other buildings and there is no extra space for additional site amenities.

B

Site: Building has been abandoned since 1997 and there are no access control measures in place. Egress, accessibility, fire protection measure and other safety features would need to be addressed for any viable reuse of space.

C

Size and Proportion: Classroom sizes are too small for large group instructional standards. Any redesign of the space would have to consider uses for small-group based instruction.

D

Equipment and Infrastructure: All equipment and all infrastructure would likely need complete replacement if this building were to be used again.

E

Space Type and Adjacency: Load-bearing masonry structure would create challenges for the major reconfiguration of spaces that would be necessary to meet today's educational expectations.

F

Environment: Few historic details remain on the inside of the building, and finishes are in serious disrepair. Investment in rehabilitation, however, could create a unique and interesting environment.

BEST PRACTICES IN EDUCATIONAL DESIGN FOR MODERN LEARNING ENVIRONMENTS

The past several decades have seen incredible changes in the ways we learn and the ways we relate to the broader world. The information revolution and its impacts have also changed the skills necessary to compete in this new world. Educators of today are tasked with developing new 21st century skills in our students in order to allow them to successfully compete in this global environment. Some of these new skills include the ability to be:

- A Critical Thinker
- A Problem solver
- An Innovator
- An Effective Communicator
- An Effective Collaborator
- A Self-Directed Learner
- Information and Media Literate
- Globally Aware
- Civically Engaged
- Financially and Economically Literate

Unfortunately, while our world has changed, our educational institutions are often some of the last places to reflect this change. We believe the learning facility and its infrastructure can play a significant role in helping educators to develop these necessary skills. The built environment can provide the context for these important functions with spaces that support integrated technology, dynamic collaboration, hands-on learning, flexibility, transparency, and private/public partnerships.

This document is a compilation of knowledge learned over many years of experience designing educational facilities at all levels, and from ongoing research into educational trends. The application of these principles can vary greatly but we believe the themes and objectives will remain fairly consistent. These best practices cover general recommendations and considerations for design in the areas of:

- General Site Design
- Security and Safety
- Building Configuration and Adjacencies
- Main Office/Administration
- Student Services
- General Learning Environments
- Specialty Learning Areas
- Students with Disabilities
- Common Spaces
- Physical Education and Athletics
- Performance Spaces

It is our hope that these best practices will serve to inform both private and public school districts as they seek to create dynamic and authentic learning environments that will impact our students and our future for years to come.

GENERAL SITE DESIGN

One of the most important aspects of school design is the layout and configuration of the site. How the site is used can have significant impacts on opportunities for physical activity, environmental studies, safety, and traffic flow. In rural or suburban environments where more space may be available, solutions can look very different than they might look in tight, urban sites:

Physical Site Attributes: The simplest sites are relatively flat with adequate area for playfields, greenspace, parking, traffic circulations, and building additions. Wetlands or steep topography can become site assets, but can also create barriers for supervision, use, and site accessibility if not adequately accommodated.

Athletic Areas: Develop age-appropriate fields based on the athletic programs offered, physical education needs, and opportunities for community use. The site is often viewed as a community amenity, and opportunities to share the use of playfields with club sports, or park and recreational departments can help to strengthen community relationships and build good-will. Consider multi-use synthetic surfaces or other strategies to ensure that fields do not become one-dimensional.

Playgrounds (K-8): Playgrounds should consist of hard-surfaced areas, soft-surfaced areas with play structures, and green space. Hard-surfaced areas should be adequately sized for use in inclement weather conditions and should provide for a variety of both structured and non-structured activities. Dynamic play structures need to be age appropriate, and should be surrounded by soft-surfaced areas to minimize injuries. The environment should encourage physical, creative, and imaginative play. Consider incorporating natural elements like boulders and landforms into soft-surface areas to encourage student interaction with nature. Proximity to nature, including trees, garden beds, and landscaped areas should be encouraged.

Structured Outdoor Areas (9-12): For older students, this often takes the form of an outdoor “quad” or “green.” This space should provide an opportunity for student interaction in a natural setting, but should also include hard-surfaced areas that can be used in inclement weather. Inclusion of large trees, landscaped areas, and walls or boulders that encourage student to interact with each other and with their surroundings are encouraged. Best practice would also include a presentation area that can be used as an outdoor classroom.

Natural Areas: As awareness of global and environmental sustainability grows, there is an increased need for students to experience nature first hand. Care should be taken to place these natural areas where they can be easily observed and access can be adequately controlled. Natural prairie, woodlands, and wetland areas are significant assets if these areas can be incorporated into the curriculum and regularly utilized. Garden areas can also be a tremendous opportunity to encourage children to interact with nature and are often much easier to supervise. More and more studies are showing the positive benefits of environmental exposure for the health and well-being of both youth and adults.

SECURITY + SAFETY

As awareness of potential dangers continues to grow, design for security and safety has become paramount. It involves controlling traffic and pedestrian routes to minimize hazards, creating spaces that are deterrents to bullying and other unsafe student interactions, designing for direct and passive supervision, creating safe places for staff and guardian interactions, and creating barriers for potential intruders. It is important to note that no building is perfectly safe or perfectly secure from all threats. The level of safety and security must be carefully balanced with the other desired environmental attributes to develop a solution that best responds to overall priorities and goals. Some general best practices, however include:

Traffic Management: Pick-up and drop-off procedures are often one of the greatest causes of safety concerns on a school site. Guardian or student traffic should be separated completely from bus traffic. This generally requires separate drive lanes for buses and cars. In schools where a large percentage of students arrive by car, care must be taken to ensure adequate queueing distance is provided. Ideally pick-up and drop-off lanes will be one-way, oriented with sidewalks immediately to the passenger side of the vehicle, so students can enter or exit directly without crossing traffic. Most schools choose to directly facilitate the entire student pick-up procedure to ensure that students can be safely released to waiting vehicles without requiring guardians to leave the vehicle. This minimizes congestion, and expedites the process considerably.

Site Security: Consider enclosing areas of the site where students congregate. This is especially appropriate for lower grade levels, and in areas with close proximity to pedestrian or vehicular traffic. Enclosing the perimeter can help keep children in supervised areas, while deterring potential intruders.

Secure Entrance Procedures: All exterior doors should be locked and monitored by electronic door contacts and video surveillance. It is important, however, for visitors to feel welcome. This begins by creating a single, identifiable point of entry. Access is controlled seamlessly at this point so that potential disruptions or dangers can be addressed before contact is made with students or teachers. Consider use of safety-laminated glass to prevent breakins or other security breaches. A receptionist should be able to observe visitors arriving before allowing the visitor to enter. Once inside the building, visitors should only have access to the reception area. When the reason for the visit is ascertained, if appropriate, the visitor can be released to other portions of the building.

Layers of Security: In the event of an intruder or safety concern, multiple barriers, or layers of security should be utilized to allow emergency personnel the time they need to respond. Typically, locked exterior doors provide the first layer of security. Locked doors from the reception area to the interior of the building form a second layer. Additional security doors between public areas of the facility (cafeteria/commons/gymnasium) and student learning environments should be able to lock electronically in an intruder situation for a third layer of security. In many cases, learning environments can be grouped to form learning neighborhoods which can by automatically locked down for a fourth layer of security. Finally, individual room doors can be locked to form the final barrier.

Transparency and Supervision: One of the most important aspects of safety and security is creating an open environment where nothing can be hidden from view. This leads to an expectation of observation from both staff and students. This level of direct and passive supervision is a major deterrent to bullying and other unsafe student interactions, as well as forming a deterrent for adult to child abuse. Finally, in the event of an intruder situation, the elimination of hiding places is key to a quick response from emergency personnel

BUILDING CONFIGURATION + ADJACENCIES

There are virtually endless options for how a school can be configured, but most current strategies share themes of flexibility, transparency, and spaces that support differentiated learning. This section focuses on a few of the current trends in school organization, but ultimately all concepts must be evaluated based on their support of district goals and priorities:

Learning Neighborhood: This strategy attempts to group students together within the school to create smaller communities. This typically occurs by grade or age, but could also occur based on a subject area. The basic concept is to create a more intimate environment within the school where students and teachers with similar concerns can share common resources and spaces. Consider creating spaces appropriate to the types of instruction that will be provided. This may include large group areas for groups of 60 or more, areas for groups of 20-30, small group areas for 5-10 students, and spaces that can be used for one-on-one instruction or individual work. Access to these different types of spaces should allow students to work in environments most conducive to the work that they are doing or the type of instruction they are receiving. For teaching staff, consider creating shared office/work areas, and common storage areas to further encourage sharing of resources and day-to-day interaction. This can also greatly reduce clutter and maximize flexibility of learning spaces.

School within a School: The school within a school concept draws inspiration from the traditional one-room schoolhouse. Similar to the learning neighborhood strategy, this approach creates smaller, more intimate settings for students and teachers within a larger facility. These smaller communities, however, are organized to create a cross-section of the student body. The range of the cross section could vary from narrower groups of just a few grades, all the way to communities that include kindergarten through 12th grade. The goal of the crosssectional approach is to encourage upward mobility. By bringing multiple levels together, students can naturally flex to ability groups that match their full potential, rather than being bound by their grade structure. This also opens opportunities for peer-to-peer mentoring as students of different ages and ability levels interact more closely with each other. As in the Learning Neighborhood concept, consider creating a variety of shared learning and resource areas, conducive to the types of activities that will occur in those spaces.

Learning Street: This concept expands on the idea of the circulation corridor, and turns it into a resource for learning. As a great urban street becomes a hub of activity in a community, the learning street becomes an extended common resource for the entire school. The corridor is widened and outfitted with comfortable furniture groupings that students are encouraged to use for socialization and interaction when appropriate. Interactive display boards and teaching walls are incorporated into the corridor so that teachers can utilize the space as break-out learning environments, or places for group work to occur. Transparency between principle learning environments and the learning street is necessary to ensure that the students can move freely between spaces while still being observed.

MAIN OFFICE + ADMINISTRATION

The Main office and administration area often serves as the front door of the building. This is where visitors are welcomed, where meeting are conducted, and where issues are resolved. It must be easy to locate, controlled, and functional. A few specific recommendations include:

Reception: The reception area should be secured as described in the safety and security section. It should have open views both to outside approaching visitors, and to inside approaching students or staff. There should be adequate space for visitors and students to wait and for reception staff to do their work. Ideally, work areas should be obscured from view to minimize clutter, but open enough to allow supervision of the reception area. Consider opportunities for branding and celebration of student work through digital displays.

Offices: Transparency and privacy should be carefully balanced in office areas. Staff should never be isolated with students or visitors, but casual supervision from other students or visitors should be blocked. Provisions should be made for private administration/guardian meetings either with small conference areas within each office, larger shared office areas, or a combination of both. Consider the possibility of creating open office areas to facilitate staff collaboration, with shared conference and meeting rooms.

Health: Health rooms require active supervision. This is simple if a full time nurse or attendant will always be in the health area, but in other circumstances requires supervision from the reception area. Again, privacy and transparency must be balanced.

Attendance: For larger schools, the attendance function often requires separate staff and separate office areas. If this is the case, the attendance area should be readily accessed by students and staff from within the building, and should maintain proximity with other office areas to allow for shared staff resources.

STUDENT SERVICES

Especially for older grade levels, student service areas provide space for students to meet with advisors, counselors, or mental health professionals, access career and college resources, or receive other needed supports.

Location: Student services should be centrally located, easily identifiable, and welcoming. It is important that the space should be designed as a resource for students, and should not carry any stigma associated with entering.

Career Center: The front door to student services may enter directly into a career center. This is often a location for students to access resources, conduct research, or work on career and college applications. It often doubles as a waiting area for students who may be meeting with staff as well. It should be comfortable, welcoming, open, and supervised. Consider creating a presentation area that can be used by college or job recruiters as well.

Offices: Offices should be designed to accommodate private staff work, as well as meeting with students. Again, privacy and transparency must be carefully balanced to avoid isolating staff with students, but still allow for students to receive services discretely when necessary. Consider creating shared conference rooms for larger meetings, IEP's or student/guardian meetings. Access to discretely located toilet facilities is recommended for students who may need to compose themselves or deal with embarrassing personal situations.

GENERAL LEARNING ENVIRONMENTS

As awareness of potential dangers continues to grow, design for security and safety has become As the goals and objectives for 21st century learning have changed, the design of the physical environment needs to change as well. While variations on design concepts are almost limitless, some general design themes have begun to emerge. Modern learning environments need to be flexible, adaptable, collaborative, and transparent, with seamless technology. Student need to learn in places that are bright, filled with natural light, comfortable, and stimulating. Some best practices include designing learning spaces for:

Flexibility and Adaptability: The one constant of modern learning environments seems to be that everything changes. Building flexibility into the space allows for multiple forms of teaching and multiple types of activities. Lightweight furniture that can roll or move easily allows students to constantly reconfigure their environments. Consider movable glass walls or sound-resistive dividers that can allow spaces to be used for small group exercises, or opened up for large group instruction. Consider foregoing the heavy, load-bearing concrete block partitions of the past for lightweight stud walls that can be easily deconstructed and relocated or reconfigured as space needs change.

Collaboration: Modern learning environments have moved away from individual teachers who own their own individual classrooms. Instead, the environment is generally composed of a variety of interwoven spaces, which vary in size and amenities depending on their use. Students move freely from small group rooms to large group instruction areas, or learning commons. The variety of spaces can help facilitate a move towards a more collaborative, project-based learning environment Teachers are also encouraged to collaborate, and shared amenities like office spaces, work areas, and storage space can help to create the desired communal atmosphere.

Creativity: 21st Century learning has moved from a teacher-based model to a student-based learning model. Curriculum is differentiated based on student need, and students are expected to take more control of their own learning. The environment can serve as a tool to empower students and facilitate this shift. Creating an atmosphere that is inspiring, creative, colorful, and comfortable encourages ownership and self-determination. Access to resources like water, physical manipulatives, building supplies, and tools can also help to infuse a hands-on, maker culture within a school.

Transparency and Light: There is a growing body of evidence linking natural light to improved student performance. But transparency is about more than just bringing natural light in. It is about creating connectivity between spaces. Visual connections help to facilitate the collaborative community needed for today's learners. Visual connections also allow for the necessary supervision required for students to work more independently and as groups. The open environment that transparency creates ensures that students and staff alike are less isolated and more aware of the needs of others.

Seamless Technology: Technology should no longer be limited to specific rooms or areas of a building. Learning happens everywhere, and technology is an integral part of that learning. Create information systems that support and encourage the use of personal devices. Interactive technology solutions allow students to move content seamlessly from their individual devices to shared displays, or presentation areas. Consider creative solutions for device charging and electrical access.

SPECIALTY LEARNING AREAS

The basic themes described in general learning environments apply to almost every space where learning happens. But some spaces have more specific needs as well. Some of these needs are outlined by space type below:

Science: As in other learning environments, the themes are flexibility and transparency. Traditionally, science equipment needs (gas, water, casework, hoods) led to spaces that were inefficient and could be used for only one purpose. Today's labs can be much more flexible. Consider placing gas and water services at the perimeter of the room or minimizing the equipment to small islands only. Flexible work surfaces, then, can be reconfigured for either lab or lecture formats, making the space much more usable for a wide range of functions. Consider the use of movable walls between rooms to allow for smaller or larger group formats. This can also allow lab areas to be shared more directly by multiple users. As STEM or STEAM and other multi-disciplinary approaches continue to grow in popularity, consider common resource areas, and breakout spaces that encourage cross-disciplinary work.

Art: Great art spaces need the traditional amenities of wide, deep sinks for cleanup, ample natural light (ideally north facing) and access to equipment for the various art media (kilns, paint hoods, pottery wheels, soldering booths, grinding wheels, etc). Modern art programs need to take advantage of computer based software, and electronic resources as well. Consider opportunities to share amenities with technical education spaces, including metal working and welding capabilities, wood-working tools, 3D printers, and software applications. The amenities of the art room can also be utilized by other programs to assist in project-based, or maker opportunities. Transparency between art rooms and adjacent spaces can aid in creating a more collaborative environment. Mobile furniture and technology can create more flexibility within the space.

Music: Music spaces must be customized to some extent for their specific uses in terms of space, storage, and acoustical needs. Some flexibility, however can be maintained by the use of portable risers, movable band shells, and modern audio capabilities. Proximity to performance spaces is often important and music spaces can often double as green rooms. In some cases, band rooms can also serve as remote orchestra pits for performances. Consider the use of the music spaces themselves as small performance venues when appropriate.

Family and Consumer Education (FaCE): While traditional home economics focused on atomic age home-making skills, modern programs are designed to create career pathways. Physical environments should be designed to reflect real world professional environments. Culinary arts spaces should replicate restaurant kitchens. Fashion Design should happen in a design studio. Consider other career paths like food science, and interior design. Again, collaboration and sharing of resources between departments should be encouraged.

Technical and Agricultural Education: As career possibilities in technical and agricultural fields shift, these environments need to shift as well. The range of possibilities that exist can make it challenging for school districts to determine where they should focus their attention. In order to maintain meaningful opportunities for career preparedness however, developing a vision is often critical to the success of the program. Industry partnerships may also play a critical role. As in other areas, the physical design of these spaces should focus on creating maximum flexibility. A large, multi-disciplinary “Fab Lab” may allow for many more student opportunities than isolated, single function rooms. Create environments that are open, collaborative, and project-based. The equipment in this area, can serve to enhance not only the tech ed curriculum, but can assist in project-based and maker experiences in other curriculums as well.

STUDENTS WITH DISABILITIES

Education for students with disabilities was largely non-existent in public schools before 1975 and the passage of the Education for All Handicapped Children Act (EHA) and the Individuals with Disabilities Education Act (IDEA). Since then, strategies and programs have seen substantial improvements. Amendments to the IDEA in 2004 mandated Individualized Education Plans (IEP's) and ensured that students with disabilities are placed in the least restrictive environments possible. The goal is generally inclusion, or to provide specialized education alongside a student's peers. The physical design of both general learning environments, and specialized learning environments can serve an important role in allowing for the effective implementation of these ideas. The learning environment should empower individuals with disabilities to reach their fullest potential and should reinforce the value of each unique individual regardless of their specific abilities. Some best practices for this include:

Variety of Spaces: The first learning environment for a student with disabilities should be the principle learning environment of the student's peers. If these principle learning spaces are designed to allow for differentiated, studentcentered learning, this becomes especially enabling for those with the greatest needs. Learning environments that include breakout work areas, small group rooms, and meeting spaces allow for students to work within the environment that best support their needs without the potential stigma of withdrawing from their peers. These types of spaces also enable teachers and specialists to provide specific intervention or assistance within the primary learning environment. In many cases the specialist is able to come to the student, instead of requiring the student to come to them.

Surroundings that Calm: All students need quiet and space for introspection, and all learning environments should be designed to allow for this to some extent. For some students, however, it may become necessary to withdraw more completely. Often, this setting is a separate learning space designed for fewer children and less distractions. These spaces can provide more intimate settings with alcoves or personal pods that can be used to create personal space. Full spectrum, color changing LED lights can be used to create calming effects. Avoid the use of fluorescent lighting which can be prone to flickering or buzzing. These distractions can be very severe for those with autism spectrum disorders. The use of sensory spaces where students can calm themselves with tactile sensory stimulation is also encouraged. Sensory spaces are often separate and distinct rooms, but sensory features can also be incorporated into other learning environments. It should be noted that sensory rooms are not "time-out" rooms and should not be used as such.

Life Skills Training: Part of the IEP for each student involves transition goals for post-secondary training, education, employment, and independent living. While detailed plans are usually not developed until age fourteen, transitional skills training may be appropriate beginning with much younger children. Students should have access to real world work and living amenities appropriate to their age and abilities. Kitchen, laundry, bedroom, and other apartment type settings can be incorporated into the design of spaces to assist in the development of these skills.

Discrete Personal Assistance: For some students, specific goals and training may be needed in the areas of toiletry and personal hygiene. These students may find themselves particularly subject to embarrassment in peer situations. Provisions for bathing and toileting should be easily accessed and discretely located. Provide toilet and shower facilities with ample room for changing tables and personal assistance.

COMMON SPACES

Some of the most underutilized spaces in traditional schools have been the common spaces. Corridors were pathways to get from point A to point B, cafeterias were places in which food was consumed, and libraries were places where books were viewed and stored. With careful design, these areas can become active learning environments, places where students can congregate and socialize, places where knowledge is disseminated, and where student achievements are celebrated. The effective use of these spaces, again, involves the themes of flexibility, creativity, and transparency.

Corridors (Learning Streets): As the need for differentiated learning has increased, corridors have often had to serve the role of de facto breakout space. Students use the corridor for makeup tests, for reading groups, or for socialization. It has been said that in many schools the corridor is the only space that students feel belongs to them (teachers own the classrooms). It is time for the design of the corridor to reflect this reality. By widening the corridors and providing appropriate flexible furniture groupings, the corridor can become a learning street. Windows between the principle learning environment and the corridor allow for supervision, enabling the corridor to function as a regular breakout space. Digital displays can be used to share information, celebrate student achievements, and highlight student work. Socialization and informal learning opportunities should be encouraged.

Cafeteria (Student Commons): With the correct design, a cafeteria can be so much more than a lunch room. In fact, some schools are now eliminating the lunchroom altogether and serving food in classrooms, or learning neighborhoods. If a central cafeteria is maintained, however, best practice is to open the space up to the rest of the school, allowing it to serve as a hub for student activity throughout the day. Breakout groups, club activities, presentations, and class exercises can all happen in this space. For older students especially, the commons can be a place for studying and independent work as well. Consider snack and beverage options which could be facilitated by culinary arts, business, or students with disabilities programs.

Library (Media Center / Information Commons): The information revolution has had one of the most profound impacts on the library. While the library used to be the place where information was received, much of this information is now available digitally anywhere and at any time. As a response to this, the library can be thought of now as an information commons. Rather than a place to GET information, it is a place to USE and process that information. As a result, the physical environment of the library needs to be much more open and collaborative. Consider creating comfortable furniture grouping for individual study or small group work. Glass conference rooms can be used for larger groups, noisier activities, or for quiet study. Consider opportunities for presentation areas within the space. The information commons is usually the place to go for technology related questions, and may house student-staffed help centers. The environment should be comfortable and student-centered. Conceptually, the information commons may be viewed as an extension of the student commons. Provide opportunities for interactive displays, access to electricity for charging personal devices, and video and sound production equipment. Coffee, juice, or healthy snacking may be encouraged.

CAFE

PHYSICAL EDUCATION + ATHLETICS

Growing emphasis on healthy living and lifestyle choices have brought renewed attention in recent years to spaces for physical activity. Indoor physical education and athletic programs often utilize the same spaces, but serve very different purposes. While athletics may only impact a narrow portion of the student body, physical education should affect all students. Look for opportunities to infuse activity and healthy living into all aspects of school design. Depending on the needs of the school, the types of spaces provided may vary greatly, but a few recommendations for specific spaces include:

Gymnasiums: The size, number, and features of a gymnasium depend largely on the activities that will happen in a space. If the gym will also serve as a performance space, this can further complicate the design. A large percentage of a school's design budget will often be spend on gymnasiums, so consider making these spaces as multi-functional as possible. Consider both P.E. and athletic needs. Create spaces that are filled with light for physical activity during the day. Adequate clearances are needed around the perimeter and to the ceiling for the activities that will occur in the space. Look for opportunities to allow for community use, and partnerships with outside groups. Consider positioning the gym so that it can be separated from academic areas to allow for maximum afterhours use. For competition gymnasiums proximity to common areas is often needed during events. Rather than a separate area dedicated to the gymnasium, consider combining this space with other common areas, so that it can be utilized throughout the day.

Fitness Areas: Fitness centers should be designed for the entire student body, and not just for athletic programs. With this broader focus, more emphasis is often placed on aerobic and cardiovascular training rather than weight training alone. The fitness center should be designed to serve as a station for physical education during the day. Before and afterhours use by the entire student body, and potentially the broader community, should also be considered.

Locker Facilities: Locker facilities should be designed for privacy and flexibility. At younger age levels, showers are much less necessary than in years past. At all levels, when showers are provided, individual showers rather than group shower areas should be used. Consider providing options for private changing areas as well, to help create a more inclusive environment. For team locker rooms, consider flexible designs that allow usages to change from season to season. Consider the possibility that locker rooms may need to be able to switch from one gender to the other, depending on seasonal needs for male and female athletics.

Life Fitness

PERFORMANCE SPACES

Performance venues can vary greatly based on the needs of the specific school. While small performance areas for class events can often be incorporated into the learning environment, larger venues for holiday programs, dramatic performances or community events may often be needed. A few things to consider:

Type of Performance: The attributes of the space needed for a school assembly are drastically different than those needed for dramatic production. For elementary schools and general assemblies, portable stages and rented equipment can sometimes be the most flexible and cost-effective solutions. For frequent dramatic productions, however, the needs are more substantial. Consider the number of audience members that should be accommodated carefully, as this will have a major impact on the size of the space. If a fly space is to be provided, the height necessary for the fly space must also be considered. For full dramatic performances, stage construction areas, green rooms, and orchestra pits should all be considered. Recent advances in technology may allow for a remote orchestra pit if space is constrained, rather than a full orchestra pit. Full acoustic modeling and design should be considered.

Frequency of Use: A full dramatic performance venue is a significant resource investment for a school district. To justify this expenditure, performance spaces need to be well-utilized. Design spaces for maximum flexibility. Consider using the venue for student assemblies, video productions, and community events. Stage construction areas can be shared with construction technology spaces. Pursue community partnerships. Shared resources and shared uses benefit both the district and the community, and can help build good will. Community support of the arts is critical to the success of the program.

CONCLUSION

As school districts seek to create environments appropriate for the education of today's students, it is our hope that this document will provide some context for that process. While there are certainly many design possibilities and circumstances that are not covered here, we believe the themes presented will prove useful. Strive to create schools that make learning relevant. Create spaces that are safe, flexible, transparent, and collaborative. Provide environments that are comfortable, bright, filled with natural light, and inspiring. Put students first. Our future depends on it.