



Abington Heights School District

District-Wide Facilities Study

February 22, 2023

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ABINGTON HEIGHTS SCHOOL DISTRICT

DISTRICT-WIDE FACILITIES STUDY

February 22, 2023



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The team of KCBA Architects and Snyder Hoffman Associates would like to thank the board, administration, faculty, and community of the Abington Heights School District for the opportunity to undertake this district-wide facilities study. We are proud of the results of our collective efforts and hope this report will be a helpful tool in implementing an optimal long-term strategy for your facilities.

Purpose of Study

Abington Heights School District commissioned this study to engage a comprehensive review of the condition of all existing facilities and their success in supporting day-to-day operations and educational programming. The findings from this effort has formed the basis of a series of potential long-term capital upgrade scenarios to maintain appropriate, well-functioning facilities for the district community.

Process

Information was gathered via several primary sources to identify both operational and educational needs related to facilities: collection of historical building data, onsite inspections of all facilities, and workshops with district administrators and faculty. The outcome of this research formed the basis of sections 4 (educational program analysis), 5 (existing conditions analysis), and 6 (facilities conditions index) of this report.

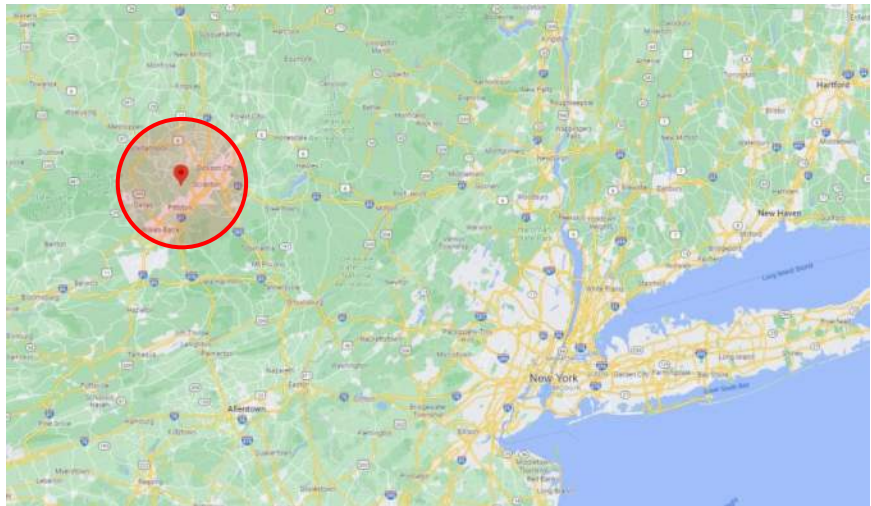
At the conclusion of the research/evaluation phase, a series of potential long-term building program options were developed. Presented in section 7, these options represent scenarios of varying nature, scope, and cost to address identified needs and maintain modern, durable, flexible environments customized to your district's educational program and operational standards.

Our team looks forward to working closely with you in the future as you review these scenarios and work toward identifying the best long-term course for your district and community.

Abington Heights School District District Overview

Located in Lackawanna County, Pennsylvania, Abington Heights School District encompasses approximately 69 square miles. It serves the boroughs of Clarks Green and Clarks Summit and the townships of Waverly, Glenburn, Newton, North Abington, Ransom, and South Abington. The district is home to approximately 25,000 residents.

Located approximately two and a half hours northwest of New York City, and just west of the city of Scranton, the school district features a mix of suburban communities and a wide range of recreational and cultural opportunities.



Map Indicating Region of Abington Heights School District

The Abington Heights School District was formed in 1964 as a consolidation of former independent school districts: Clarks Summit, Waverly, and Newton-Ransom.

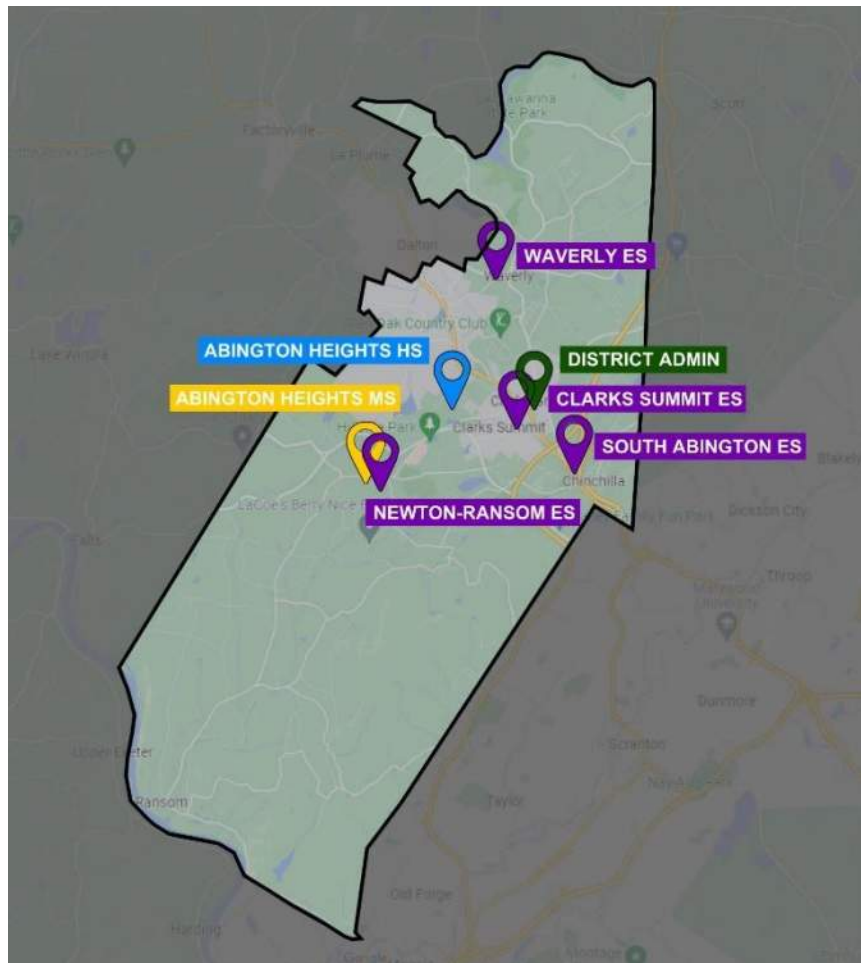
The district currently operates four K-4 elementary schools, one grade 5-8 middle school, and one high school for grades 9-12. Total student enrollment for the 2021-2022 academic year was 3,403.

Approximately 220 teachers are employed by the district with an average student to teacher ratio of 15 to 1.

Mission Statement

Abington Heights is a diverse, dynamic and caring community whose mission is to seek excellence and individual growth by:

- Educating students to be inquisitive, independent, literate, culturally aware, lifelong learners with positive self-esteem, and the ability to think critically and creatively.
- Developing and supporting a well-trained, valued, and committed staff.
- Providing a challenging, comprehensive program in a safe and nurturing environment.
- Empowering students to achieve their full potential.
- Promoting lifelong civic engagement.
- Directing today's energies, efforts, and resources toward achieve our guiding vision.



Map of District-Owned Facilities

Abington Heights School District Enrollment Report

The following pages feature the enrollment projections for Abington Heights School District compiled by the Pennsylvania Department of Education. The charts log the actual enrollment for the prior 5 years and enrollment projections for the next 10 years.

Recent student enrollment in the district has exhibited a modest increase, rising from 3,388 total students in 2017-018 to 3,403 in 2021-2022. That trend is projected to continue for the next ten years with a small net gain of 55 students by the 2031-2032 school year. The additional students projected to be added over the next ten years are evenly distributed throughout grades K through 12.

Abington Heights SD 119350303

<u>YEAR</u>	<u>K</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>Total</u>
Actual														
2017 - 2018	200	263	251	241	270	264	267	308	265	275	258	255	271	3388
2018 - 2019	212	230	279	244	242	287	264	265	304	262	268	258	251	3366
2019 - 2020	230	253	227	282	251	263	286	285	266	306	248	268	260	3425
2020 - 2021	214	259	236	223	273	254	257	291	280	249	311	238	266	3351
2021 - 2022	214	230	262	244	241	295	261	266	298	276	251	310	255	3403
Projection														
2022 - 2023	214	258	230	262	249	256	295	269	266	292	272	251	314	3428
2023 - 2024	219	253	257	230	267	264	256	304	269	260	288	272	255	3394
2024 - 2025	201	259	253	257	235	283	264	264	304	263	256	288	276	3403
2025 - 2026	219	238	258	253	262	249	283	272	264	298	259	256	292	3403
2026 - 2027	219	259	238	258	258	278	249	292	272	259	294	259	260	3395
2027 - 2028	219	259	258	238	263	274	278	257	292	266	255	294	263	3416
2028 - 2029	219	259	258	258	243	279	274	287	257	286	262	255	298	3435
2029 - 2030	219	259	258	258	263	258	279	283	287	252	282	262	259	3419
2030 - 2031	219	259	258	258	263	279	258	288	283	281	249	282	266	3443
2031 - 2032	219	259	258	258	263	279	279	266	288	277	277	249	286	3458

Various Grade Groupings of the Enrollment Projections

YEAR	K-4	K-5	K-6	K-7	K-8	K-9	K-12	5-8	6-8	7-8	6-9	7-9	7-12	8-12	9-12	10-12
2021 - 2022	1191	1486	1747	2013	2311	2587	3403	1120	825	564	1101	840	1656	1390	1092	816
2026 - 2027	1232	1510	1759	2051	2323	2582	3395	1091	813	564	1072	823	1636	1344	1072	813
2031 - 2032	1257	1536	1815	2081	2369	2646	3458	1112	833	554	1110	831	1643	1377	1089	812

- Notes:
1. Excludes students in full-time out-of-district special education, comprehensive AVTSs, charter schools, state-owned schools, consortium-operated alternative high schools, and juvenile correctional institutions.
 2. Enrollment projections beyond five years are subject to errors in the lower grades resulting from inconsistencies between actual and projected live births and should be reviewed closely.
 3. Four year old kindergarten students, if any, added to K enrollments.
 4. Elementary and secondary ungraded students were distributed among the grades. Therefore, enrollments by grade may differ from those reported by the local education agencies.
- Sources:
1. Pennsylvania Information Management System (PIMS)
 2. Resident Live Birth file supplied by the Division of Health Statistics, Pennsylvania Department of Health. The Department of Health specifically disclaims responsibility for any analyses, interpretations or conclusions.

Retention Rate by Grade by Year

	<u>Birth to K</u>	<u>Birth to 1</u>	<u>1 to 2</u>	<u>2 to 3</u>	<u>3 to 4</u>	<u>4 to 5</u>	<u>5 to 6</u>	<u>6 to 7</u>	<u>7 to 8</u>	<u>8 to 9</u>	<u>9 to 10</u>	<u>10 to 11</u>	<u>11 to 12</u>
2017-18 to 2018-19	1.10417	1.27072	1.06084	0.97211	1.00415	1.06296	1	0.99251	0.98701	0.98868	0.97455	1	0.98431
2018-19 to 2019-20	1.19792	1.31771	0.98696	1.01075	1.02869	1.08678	0.99652	1.07955	1.00377	1.00658	0.94656	1	1.00775
2019-20 to 2020-21	1.06468	1.34896	0.93281	0.98238	0.96809	1.01195	0.97719	1.01748	0.98246	0.93609	1.01634	0.95968	0.99254
2020-21 to 2021-22	1.05419	1.14428	1.01158	1.0339	1.08072	1.08059	1.02756	1.03502	1.02405	0.98571	1.00803	0.99678	1.07143
Average Rate	1.10524	1.27042	0.99805	0.99979	1.02041	1.06057	1.00032	1.03114	0.99932	0.97927	0.98637	0.98912	1.01401
Retention Rate Used	1.07434	1.27042	0.99805	0.99979	1.02041	1.06057	1.00032	1.03114	0.99932	0.97927	0.98637	0.99893	1.01401

Year	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
Births	181	192	192	201	203	199	204	187	204	204	204	204	204	204	204

| ----- Projected Births ----- |

To analyze the district's educational program, KCBA examined the current use of each building within Abington Heights School District. In this section we present a program chart for each building showing the number, size, and student capacity (if applicable) of each space.

Elementary Schools – Educational Program Summary

The four elementary schools have grade-level classrooms, a library, a shared music/art room, and a multi-purpose room that serves as a gym, cafeteria, and auditorium. Some schools have a foldable stage system.

Each school also provides space for learning support. Most special education classes such as autistic and emotional support are housed at Clarks Summit Elementary.

Secondary Schools – Educational Program Summary

The middle school and high school both provide core academic classrooms; specialized educational spaces like technology education, family and consumer sciences, computer, and library; art and music classrooms; athletic educational and training spaces; a cafeteria; and an auditorium.

The district has shown a need within the middle school and high school buildings for areas that can accommodate collaborative learning environment for students. The middle school does not currently have any empty classrooms or areas to add these accommodations. There's also a desire for STEM and technology-based learning at the middle and high school levels.



2023					
Existing			Capacity		Remarks
No.	NSF	Total	Per room	Total	
CORE ACADEMIC PROGRAM					
Kindergarten	2	950	1,900	25	50
Toilet			0		0
Classroom First Grade	2	830	1,660	25	50
Toilet			0		0
Classroom First Grade	1	715	715	25	25
Classroom First Grade	1	830	830	25	25
Classroom Second Grade	3	830	2,490	25	75
Classroom Second Grade	1	890	890	25	25
Classroom Third Grade	2	775	1,550	25	50
Classroom Third Grade	2	830	1,660	25	50
Classroom Fourth Grade	4	830	3,320	25	100
Subtotal			15,015		450
SPECIAL EDUCATION					
Autistic Support	1	950	950	0	0
Autistic Support	1	700	700	0	0
Speech and Language	1	280	280	0	0
Autistic Support	1	830	830	0	0
Learning Support K-3	1	830	830	0	0
Title 1 Reading	1	600	600	0	0
EIT Math	1	830	830	0	0
Reading Specialist	1	830	830	0	0
Learning Support 4	1	830	830	0	0
Sensory Room	1	830	830	0	0
Occupational Therapy	1	830	830	0	0
ELD	1	280	280	0	0
Emotional Support	1	900	900	0	0
Subtotal			9,520		0
TECH/SPECIALIZED EDUCATION					
Library	1	1,470	1,470	0	0
Subtotal			1,470		0
ART AND MUSIC					
Art Room	1	1,500	1,500	0	0
Music	1	1,200	1,200	0	0
Subtotal			2,700		0
BUILDING SUPPORT					
Cafeteria	1	2,450	2,450	0	0
Kitchen	1	1,800	1,800	0	0
Library	1	1,600	1,600	0	0
Auditorium	1	7,200	7,200	0	0
Gymnasium	1	9,600	9,600	0	0
Locker Rooms	1	3,700	3,700	0	0
Weight Room	1	1,700	1,700	0	0
Subtotal			28,050		0
SCHOOL ADMINISTRATION					
Main Office	1	1,000	1,000	0	0



2023						
Existing			Capacity		Remarks	
No.	NSF	Total	Per room	Total		
Nurse Suite	1	780	780	0	0	
Conference Room	1	830	830	0	0	
Guidance	1	360	360	0	0	
Faculty Room	1	380	380	0	0	
Subtotal		3,350		0		
SUPPORT						
Storage	1	5,400	5,400	0	0	
Subtotal		5,400		0		
BUILDING SUMMARY						
CORE ACADEMIC PROGRAM						
			15,015		450	
SPECIAL EDUCATION						
			9,520		0	
TECH/SPECIALIZED EDUCATION						
			1,470		0	
ART AND MUSIC						
			2,700		0	
BUILDING SUPPORT						
			28,050		0	
SCHOOL ADMINISTRATION						
			3,350		0	
SUPPORT						
			5,400		0	
BUILDING NET TOTAL						
			65,505		450	
BUILDING GROSS TOTAL						
			98,000			



Abington Heights School District

Program of Education Spaces
Newton-Ransom Elementary School

2023						
		Existing		Capacity		Remarks
No.	NSF	Total	Per room	Total		
CORE ACADEMIC PROGRAM						
Kindergarten	2	840	1,680	25	50	
Toilet			0		0	
Classroom First Grade	2	740	1,480	25	50	
Classroom Second Grade	2	740	1,480	25	50	
Classroom Third Grade	2	740	1,480	25	50	
Classroom Fourth Grade	2	740	1,480	25	50	
Empty Classrooms	2	740	1,480	25	50	
Subtotal			9,080		250	
SPECIAL EDUCATION						
Reading Specialist	1	740	740	0	0	
Speech	1	135	135	0	0	
Learning Support	2	850	1,700	0	0	
Subtotal			2,575		0	
TECH/SPECIALIZED EDUCATION						
Library	1	1,400	1,400	0	0	
Computer Lab	1	680	680	0	0	
Subtotal			2,080		0	
ART AND MUSIC						
Shared Art/Music Classroom	1	950	950	0	0	
Subtotal			950		0	
BUILDING SUPPORT						
Multi-purpose Room	1	5,140	5,140	0	0	
Kitchen	1	1,180	1,180	0	0	
Subtotal			6,320		0	
SCHOOL ADMINISTRATION						
Main Office	1	800	800	0	0	
Nurse Suite	1	515	515	0	0	
Guidance	1	300	300	0	0	
EIT	1	740	740	0	0	
Faculty Room	1	500	500	0	0	
Subtotal			2,855		0	
SUPPORT						
Storage	1	840	840	0	0	
Subtotal			840		0	
BUILDING SUMMARY						
CORE ACADEMIC PROGRAM			9,080		250	
SPECIAL EDUCATION			2,575		0	
TECH/SPECIALIZED EDUCATION			2,080		0	
ART AND MUSIC			950		0	
BUILDING SUPPORT			6,320		0	
SCHOOL ADMINISTRATION			2,855		0	
SUPPORT			840		0	
BUILDING NET TOTAL			24,700		250	
BUILDING GROSS TOTAL			37,000			



						2023	
			Existing		Capacity		Remarks
No.	NSF	Total	Per room	Total			
CORE ACADEMIC PROGRAM							
Kindergarten	2	880	1,760	25	50		
Toilet			0		0		
Classroom First Grade	3	900	2,700	25	75		
Toilet			0		0		
Classroom Second Grade	1	900	900	25	25		
Classroom Second Grade	2	890	1,780	25	50		
Classroom Third Grade	3	890	2,670	25	75		
Classroom Fourth Grade	3	890	2,670	25	75		
Subtotal			12,480		350		
SPECIAL EDUCATION							
Reading Specialist	1	600	600	0	0		
Speech	1	260	260	0	0		
Math Specialist	1	180	180	0	0		
Special Education	2	560	1,120	0	0		
Subtotal			2,160		0		
TECH/SPECIALIZED EDUCATION							
Library	1	1,270	1,270	0	0		
Subtotal			1,270		0		
ART AND MUSIC							
Shared Art/Music Classroom	1	950	950	0	0		
Subtotal			950		0		
BUILDING SUPPORT							
Multi-purpose Room	1	5,270	5,270	0	0		
Kitchen	1	1,000	1,000	0	0		
Subtotal			6,270		0		
SCHOOL ADMINISTRATION							
Main Office	1	626	626	0	0		
Nurse Suite	1	300	300	0	0		
Guidance	1	270	270	0	0		
Faculty Room	1	500	500	0	0		
Subtotal			1,696		0		
SUPPORT							
Storage	1	840	840	0	0		
Subtotal			840		0		
BUILDING SUMMARY							
CORE ACADEMIC PROGRAM			12,480		350		
SPECIAL EDUCATION			2,160		0		
TECH/SPECIALIZED EDUCATION			1,270		0		
ART AND MUSIC			950		0		
BUILDING SUPPORT			6,270		0		
SCHOOL ADMINISTRATION			1,696		0		
SUPPORT			840		0		
BUILDING NET TOTAL			25,666		350		
BUILDING GROSS TOTAL			37,800				



						2023	
			Existing		Capacity		Remarks
No.	NSF	Total	Per room	Total			
CORE ACADEMIC PROGRAM							
Kindergarten	3	920	2,760	25	75		
Toilet			0		0		
Classroom First Grade	3	700	2,100	25	75		
Toilet			0		0		
Classroom Second Grade	3	740	2,220	25	75		
Classroom Third Grade	3	815	2,445	25	75		
Classroom Fourth Grade	3	740	2,220	25	75		
Subtotal			11,745		375		
SPECIAL EDUCATION							
Learning Support	2	740	1,480	0	0	second floor	
Subtotal			1,480		0		
TECH/SPECIALIZED EDUCATION							
Library	1	1,470	1,470	0	0		
Subtotal			1,470		0		
ART AND MUSIC							
Shared Art/Music Classroom	1	1,040	1,040	0	0		
Subtotal			1,040		0		
BUILDING SUPPORT							
Multi-purpose Room	1	5,150	5,150	0	0		
Kitchen	1	1,100	1,100	0	0		
Subtotal			6,250		0		
SCHOOL ADMINISTRATION							
Main Office	1	645	645	0	0		
Nurse Suite	1	625	625	0	0		
Guidance	1	120	120	0	0		
EIT	1	120	120	0	0		
Faculty Room	1	270	270	0	0		
Subtotal			1,780		0		
BUILDING SUMMARY							
CORE ACADEMIC PROGRAM					11,745	375	
SPECIAL EDUCATION					1,480	0	
TECH/SPECIALIZED EDUCATION					1,470	0	
ART AND MUSIC					1,040	0	
BUILDING SUPPORT					6,250	0	
SCHOOL ADMINISTRATION					1,780	0	
BUILDING NET TOTAL					23,765	375	
BUILDING GROSS TOTAL					40,000		



Abington Heights School District

Program of Education Spaces
Abington Heights Middle School

2023					
Existing			Capacity		Remarks
No.	NSF	Total	Per room	Total	
CORE ACADEMIC PROGRAM					
5th Grade Pod	2	5,900	11,800		
5th Grade Classrooms	8			25	200
6th Grade Pod	2	5,900	11,800		
6th Grade Classrooms	8			25	200
6th Grade Science Lab	2			20	40
7th Grade Pod	2	5,900	11,800		
7th Grade Classrooms	8			25	200
7th Grade Science Lab	2			20	40
8th Grade Pod	2	5,900	11,800		
8th Grade Classrooms	8			25	200
8th Grade Science Lab	2			20	40
Subtotal		47,200		680	
SPECIAL EDUCATION					
Special Education Pod	1	5,900	5,900		
Life Skills	1	500	500	0	0
STEM	3	830	2,490	0	0
Enrichment	2	730	1,460	0	0
Reading Specialist	1	830	830	0	0
Emotional Support	1	830	830	0	0
Subtotal		12,010		0	
TECH/SPECIALIZED EDUCATION					
Library	1	2,800	2,800	0	0
STEM	1	2,400	2,400	0	0
STEM	1	1,600	1,600	0	0
Health	1	1,600	1,600	20	20
Subtotal		8,400		20	
ART AND MUSIC					
Art Classroom	1	1,700	1,700	20	20
Art Storage	1	100	100	0	0
Art Classroom	2	1,000	2,000	20	40
Band Room	1	2,000	2,000	25	25
Instrument Storage	1	800	800	0	0
Instrumental Music	1	1,600	1,600	25	25
Music Room	1	725	725	25	25
Music Storage	1	500	500	0	0
Music Room	2	500	1,000	25	50
Subtotal		10,425		185	in auditorium
ATHLETICS					
Gymnasium	1	9,000	9,000	66	66
Gym Storage	1	1,200	1,200	0	0
Auxiliary Gym	1	4,400	4,400	33	33
Locker Rooms	2	1,800	3,600	0	0
Wellness/Fitness Center	1	1,300	1,300	0	0
Subtotal		19,500		99	



Abington Heights School District

Program of Education Spaces
Abington Heights Middle School

						2023		
			Existing		Capacity			
			No.	NSF	Total	Per room	Total	Remarks
BUILDING SUPPORT								
Cafeteria	1	10,000	10,000	0	0	open area		
Storage	1	500	500	0	0			
Kitchen	1	6,000	6,000	0	0			
School Store	1	300	300	0	0			
Auditorium	1	7,500	7,500	0	0			
Stage	1	1,000	1,000	0	0			
Subtotal			25,300		0			
SCHOOL ADMINISTRATION								
Main Office	1	3,000	3,000	0	0			
Nurse Suite	1	1,150	1,150	0	0			
Faculty/Teacher Planning	10	650	6,500	0	0	One per pod		
Social Worker	1	235	235	0	0			
Dean of Students	1	150	150	0	0			
Guidance Special	1	2,000	2,000	0	0			
Guidance	1	1,700	1,700	0	0			
Subtotal			14,735		0			
SUPPORT SPACES								
Building Storage	1	1,400	1,400	0	0			
Subtotal			1,400		0			
BUILDING SUMMARY								
CORE ACADEMIC PROGRAM					47,200		680	
SPECIAL EDUCATION					12,010		0	
TECH/SPECIALIZED EDUCATION					8,400		20	
ART AND MUSIC					10,425		185	
ATHLETICS					19,500		99	
BUILDING SUPPORT					25,300		0	
SCHOOL ADMINISTRATION					14,735		0	
SUPPORT SPACES					1,400		0	
BUILDING NET TOTAL					138,970		984	
BUILDING GROSS TOTAL					140,200			



Abington Heights School District

Program of Education Spaces

Abington Heights High School

2023					
Existing			Capacity		Remarks
No.	NSF	Total	Per room	Total	
CORE ACADEMIC PROGRAM					
Science Lab	9	1,000	9,000	20	180
Prep Rooms	3	450	1,350	0	0
Science Lab	1	1,300	1,300	25	25
Science Classroom	1	740	740	0	0
English	8	860	6,880	25	200
Social Studies	9	740	6,660	25	225
World Language	6	860	5,160	25	150
World Language	2	740	1,480	25	50
Math	10	740	7,400	25	250
Business	2	1,000	2,000	25	50
Health	3	740	2,220	25	75
Subtotal			44,190		1,130
SPECIAL EDUCATION					
Learning Support	6	740	4,440	0	0
Learning Support	1	1,600	1,600	0	0
Emotional Support	1	550	550	0	0
Life Skills	1	2,800	2,800	0	0
Subtotal			9,390		0
TECH/SPECIALIZED EDUCATION					
Library	1	5,200	5,200	0	0
Library Office	1	175	175	0	0
TV Studio	1	830	830	20	20
F&CS Classroom	1	2,200	2,200	20	20
Automotive Shop	1	3,400	3,400	20	20
Classroom	1	820	820	0	0
Photography	1	1,200	1,200	20	20
Masonry Shop	1	2,800	2,800	20	20
Electronics	1	1,000	1,000	20	20
Robotics	1	940	940	20	20
Wood Shop	1	2,100	2,100	20	20
Classroom	1	820	820	0	0
Subtotal			21,485		160
ART AND MUSIC					
Art Classroom	1	1,370	1,370	20	20
Art Storage	1	200	200	0	0
Kiln Room	1	200	200	0	0
Ceramic	1	1,200	1,200	20	20
Drafting	1	1,500	1,500	20	20
Graphic Arts	1	2,100	2,100	20	20
Band	1	1,700	1,700	25	25
Band Storage	1	600	600	0	0
Practice Rms	6	80	480	0	0
Orchestra	1	1,800	1,800	25	25
Chorus	1	1,200	1,200	25	25
Music Storage	1	150	150	0	0



						2023				
		Existing		Capacity						
		No.	NSF	Total	Per room	Total	Remarks			
Subtotal				12,500		155				
ATHLETICS										
Main Gym	1	7,800	7,800	66	66					
Gym Storage	1	2,500	2,500	0	0					
Auxiliary Gym	1	6,700	6,700	66	66					
Natorium	1	7,400	7,400	0	0					
Fitness Center	1	2,000	2,000	0	0					
Locker Rooms	4	650	2,600	0	0					
Subtotal				29,000		132				
BUILDING SUPPORT										
Cafeteria	1	5,500	5,500	0	0					
Kitchen	1	3,200	3,200	0	0					
Auditorium	1	6,400	6,400	0	0					
Stage	1	3,000	3,000	0	0					
Subtotal				18,100		0				
SCHOOL ADMINISTRATION										
Main Office	1	2,300	2,300	0	0					
Nurse Suite	1	1,200	1,200	0	0					
Conference Room	1	1,000	1,000	0	0					
Guidance	1	2,500	2,500	0	0					
Subtotal				7,000		0				
SUPPORT SPACES										
Mechanical/Storage	1	1,000	1,000	0	0					
Subtotal				1,000		0				
BUILDING SUMMARY										
CORE ACADEMIC PROGRAM				44190		1,130				
SPECIAL EDUCATION				9390		0				
TECH/SPECIALIZED EDUCATION				21485		160				
ART AND MUSIC				12500		155				
ATHLETICS				29,000		132				
BUILDING SUPPORT				18100		0				
SCHOOL ADMINISTRATION				7,000		0				
SUPPORT SPACES				1,000		0				
BUILDING NET TOTAL				142665		1,577				
BUILDING GROSS TOTAL				200,100						

Abington Heights School District Existing Conditions Reports

During the course of this study, members from KCBA and Snyder Hoffman Associates toured the buildings and grounds of the school district. Our work entailed an evaluation of general conditions as well as identification of items to be considered for maintenance and/or alteration.

On the following pages, we present existing conditions reports for each school building and the district administration building. The report for each contains a narrative summary that begins with a brief description of the facility's history and key statistics followed by a description and evaluation of each major building system.

In the course of each narrative, areas that have been identified as deficient or inadequate are noted as "Issues to Consider". Each issue is given a designation that cites its building, category, and a number.

Of particular note, while KCBA observed and documented general security-related items, in 2021 the school district had engaged a Risk and Vulnerability Assessment Report for each school completed by the Pennsylvania State Police. The findings from these reports are recommended to be considered by the school district in any facilities planning efforts.

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Existing Facilities Report – Clarks Summit Elementary School
401 W Grove St, Clarks Summit, PA 18411



Clarks Summit Elementary School
front elevation

HISTORY

Clarks Summit Elementary School was originally constructed as Abington Heights High School. The school was then converted to an elementary building in 1997. It is a two-story building that is significantly larger than the other elementary schools in the district. Because of the size, a lot of district support is housed in this building. The larger gym and the athletic fields are used by upper grade levels in the district for after-school athletics. There is also a full-size auditorium in the building, which is not standard for an elementary school in the district.

BUILDING STATISTICS	
Size of Building	approximately 98,000 SF
Building Footprint	approximately 58,000 SF
Size of Site	approximately 4.5 acres
2021-2022 Enrollment	441 students
Grades	Kindergarten – Fourth Grade
Kindergarten	92 students
First Grade	80 students
Second Grade	91 students
Third Grade	91 students
Fourth Grade	87 students



Clarks Summit Elementary site

SITE

Vehicular Circulation and Parking

The parent/guardian drop-off and bus loops are separated but share an entry driveway. Buses enter and turn into the drop-off loop to the left in front of the school. Parents/guardians enter and continue straight to circle around the parking spaces for drop-off. The shared site entry causes some congestion at the intersection.

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Cracks and damage at drives/parking

Issues to Consider:

AES.S.01 Mill and overlay parking lot entrance and bus parking lot and loop within five years.

Sidewalks and Paving

Sidewalks are in fair condition. Sidewalks at the entrance of the building have been repaired in some areas. There is wear and damage to some curbs, mostly along the drop off loops.

There is cracking on the asphalt at almost all locations.

Issues to consider:

CSES.S.02 Mill and overlay asphalt within five years.



Play area and equipment

Play Area

The play equipment is in good condition. The play area is not ADA accessible from the building. The surface is wood mulch.

Issues to consider:

CSES.S.03 Create path and accessible playground with new sidewalk/paving and a new surface.

BUILDING EXTERIOR

Façade

The façade is primarily comprised of red-brown brick with concrete panel accents. There are some signs of age, but it is overall in good condition. There are some areas with signs of efflorescence at grille openings.

Fenestration

Fenestration consists of aluminum windows, aluminum storefront and doors, and aluminum curtainwall. All fenestration systems appear to be in good condition.



Rear façade with brick and concrete panels

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BUILDING INTERIOR

ADA Compliance

There is one elevator in the building that provides access to all occupied levels.

Most classroom entries and doors throughout the building comply with ADA standards.

There are locker rooms on the ground level of the building that are support the fields located at the school (not for elementary use). These toilets, showers, and locker areas do not meet ADA clearance requirements.

There are several gang and individual toilet rooms throughout the school for both students and faculty. Most of these toilet rooms do not meet current required clearances or provide current required accessories (grab bars, etc.) to meet ADA compliance.

All sinks within learning spaces (classrooms, art room, etc.) do not meet the knee clearance required by ADA.

Issues to consider:

CSES.BI.01 Renovate gang toilet rooms to provide an ADA stall, sinks, and urinals that meet clearance requirements.

CSES.BI.02 Remove existing sink fixtures and associated casework at all classroom locations. Replace with ADA compliant sink with appropriate clearance.

Other Codes

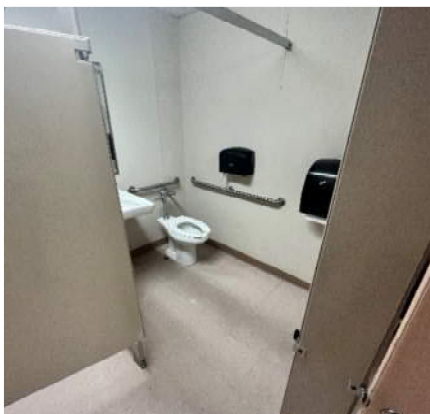
Some handrails and guardrails at stair locations do not meet the required fall protection heights or required extension lengths.

Issues to consider:

CSES.BI.03 Remove and replace all non-compliant guardrails and handrails with new equipment.



Non-compliant toilet room in locker area



“Handicap Stall” does not meet current ADA code requirements due to fixture clearance



Typical classroom non-compliant sink

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Handrail at stair with no extension

Lobby

The lobby has carpet, linear metal ceiling, and brick walls. From the lobby, the library, auditorium, main office, and gym are directly accessible.

Issues to consider:

CSES.BI.04 Replace carpet and ceiling to update the main entrance to the building.



Main lobby

Administration

The main entrance is visible from the main office but is not connected. A connected vestibule/main office is recommended for enhanced security.

The administration offices have carpet, painted walls, and acoustical ceiling tile (ACT) throughout. The finishes are in fair condition.



Disconnected administration offices

Issues to consider:

CSES.BI.05 Reconfigure area of current nurse's suite to serve as administration office in order to provide a secure vestibule to the building.

Classrooms

Classrooms have carpet, painted walls, and ACT ceiling. There is casework throughout. Most of the finishes are in fair condition.



Typical classroom

Corridors

Corridors have carpet, painted walls, and acoustical ceiling tile (ACT) throughout. The ceilings and walls are in fair condition. The carpet is in poor condition.



Typical corridor

Issues to consider:

AES.BI.05 Replace carpet in corridors with a more durable material like VCT.

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Cafeteria

The cafeteria is painted drywall, VCT floors, and ACT ceilings throughout. It is connected directly to the kitchen.



Full size gymnasium with bleachers

Gym

The full-size gymnasium has basketball courts, curtain dividers, and full bleachers that retract. The finishes are painted CMU, mat wall coverings, and wood floors. The finishes are in good condition.

Auditorium

This is the only elementary school in the district with a full-size auditorium. The auditorium has ACT ceilings, carpet, and painted walls. The finishes are in fair condition. There is little acoustical treatment in the space.



Auditorium

Library

The library is located at the front entrance of the school. There is carpet, linear metal ceiling and drywall ceiling, and brick and painted drywall interior. The finishes are in good condition. The space is large enough to facilitate STEM and other active learning programs within the space.



Library

Issues to consider:

CSES.BI.06 Renovate library to support STEM curriculum as desired at the elementary level.

HVAC

Central Heating Plant

Building hot water is generated by two natural gas-fired Weil Mclain, Model 88, 4,763 MBH cast-iron boilers with Power Flame model WCR3-GO-25B Burners. The breeching and circulator pumps associated with the boilers are in poor condition and portions of the breeching appear to have been installed prior to 1998. The hot water piping and accessories appear to be in fair condition. The chemical treatment system is in poor condition. The boilers have exceeded their expected

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Existing Weil Mclain cast-iron dual fuel boiler with Power Flame burner

service lives but no performance issues have been reported by the District.

Central Cooling Plant

The building does not have a central cooling plant. Portions of the building are conditioned by DX unit ventilators or packaged rooftop units.

Auditorium/Stage

The auditorium and stage are served by two packaged rooftop units that are on the roof of the stage. The units were installed in 1998. Distribution in the auditorium is provided by a combination of sidewall supply grilles and low return air grilles. There is no overhead distribution above the ceiling. For a space of this size and occupancy sidewall distribution is not ideal. No CO2 sensors were observed and it is assumed that the space does not have demand-controlled ventilation which is required by current International Mechanical Code.

Library

The library is served by an overhead, ducted system using a combination of traditional and slot diffusers. The space is believed to be conditioned by a rooftop unit but the unit could not be located during the walkthrough of the roof. All systems are presumed to have been installed in 1998.

Music Room

The music room is served by a pair of under-window split-system unit ventilators. The units have the ability to heat and cool, but the ability to dehumidify was noted as an issue by the District and could be observed in the ceiling tiles. The units and their condensing units (located on grade outside the space) are in fair condition, believed to have been installed in 1998.

Cafeteria and Kitchen

The cafeteria is served by an overhead, ducted rooftop heating and ventilating system and utilizes perimeter baseboard heat.

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The systems were installed in 1998 and are in operable condition. Consideration should be given to replacing the rooftop unit. The baseboard radiation is in fair condition.

The kitchen is heated and ventilated by a Trane rooftop make-up air unit. The exhaust hood is connected to an upblast grease fan on the roof. An ansul fire suppression system was observed within portions of the hood to protect certain equipment types as required by code. Systems were installed in 1998.

Administration and Nurse

The administration and nurse's areas are each served by a packaged rooftop unit that was installed in 1998. The unit is in fair condition but due for replacement. Minimal exhaust was observed in the nurse's area and consideration should be given to increasing the exhaust flow in these spaces to minimize airborne cross-contamination. Perimeter baseboard radiation is present within a majority of the exterior spaces.

Gymnasiums

The main gymnasium is served by 8 packaged gas-fired heating and ventilating rooftop units. The units were installed in 1998. No CO2 detectors were observed and it is presumed that demand-controlled ventilation is not present as required by current codes. The units are in poor condition and should be considered for replacement.

Locker Rooms

The locker rooms are not utilized. They are served by indoor heating and ventilating units that were not replaced in the 1998 renovation. The systems are antiquated and in poor condition. Exhaust and ductwork systems that were observed are in fair condition. The systems should be replaced in their entirety when the spaces are re-purposed or fully utilized.

Classrooms and Support Spaces

A majority of the classrooms were renovated in 1998 and the HVAC terminal units are heating and ventilating under-window

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Existing Locker Room H&V Unit (pre-1998)

vertical unit ventilators. Air conditioning is not present. The existing transfer air system utilizes the corridor as a plenum which is no longer permissible by International Mechanical Code due to its lack of ability to limit the transfer of smoke or fire through an egress path. Additional systems (indoor air handling units, fan coil units, ceiling-mounted horizontal unit ventilators) are present in support, auxiliary, and interior spaces.

Terminal Heating Equipment

Terminal heating equipment such as baseboard radiation, convectors and cabinet heaters are present to heat auxiliary spaces and provide comfort heating to several occupied spaces. Most components appear to have been replaced in the 1998 renovation and are in fair condition. In several instances it appears that a hot water cabinet heater was installed in front of an existing convector. The reason for this installation is unclear and the application is unusual.



Typical existing Classroom with under-window vertical Unit Ventilator

Exhaust Air System

Exhaust fans were observed serving most of the janitor's closets and toilet rooms in conformance with the requirements of the International Mechanical Code. The fans are believed to be in working order, installed in 1998. The ASHRAE Median Service Life for exhaust fans is 20 years. Exhaust was not present in the Elevator Machine Room and is required by IMC. Several janitor's closets were observed to be lacking exhaust systems.

Ductwork and Piping System

The supply, return and exhaust air ductwork appeared to be galvanized steel sheet metal and in acceptable condition. The ASHRAE Median Service Life for ductwork is 30 years. Piping and insulation within the boiler room is in fair condition.



Existing convector/cabinet heater with cabinet heater overlay

Automatic Temperature Controls

Majority of the building is controlled by a Direct Digital Controls (DDC) based system JCI Metasys system. The system provides an internet based central Building Automation System (BAS) that provided graphical representation and points from the HVAC

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Existing air compressor serving pneumatic control systems

systems throughout the building. An air compressor exists to control portions of the building that are still pneumatic and have not been converted to DDC. The air compressor appears to be in fair condition but should be abandoned as the remainder of the components are converted to a modern control system.

Issues to consider:

CSES.HVAC.01 No systems observed were installed after 1998.

All systems are at minimum 25 years old and should be considered for replacement. As part of this replacement, consideration should be given to installing a modern 4-pipe system utilizing air-cooled chillers to offer simultaneous, year-round heating and cooling. The existing boilers would be replaced with condensing boilers under this scenario to offer year-round reheat for dehumidification. This building-wide upgrade would require a new electrical service and should also address the code deficiency regarding the building's use of corridors as return air plenums.

CSES.HVAC.02 If a building-wide upgrade is not planned, at minimum the existing boilers, breeching, pumps, and hot water accessories should be replaced as they have exceeded their expected life-cycle. In addition, existing rooftop heating and ventilating units should be replaced. If air-conditioning is not anticipated for the school the existing unit ventilator system is adequate within the classrooms.

CSES.HVAC.03 All exhaust fans and auxiliary heaters that pre-date 1998 should be replaced. The units that were installed in the renovation should remain active and be serviced and replaced as needed.

CSES.HVAC.04 High occupancy spaces (gymnasium, cafeteria, auditorium) should be provided with demand-controlled ventilation to reduce energy use at time periods when the spaces are not fully occupied. In an Elementary Schools these spaces are rarely fully

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occupied and the installation of the additional control system would provide a payback less than 5 years.

CSES.HVAC.05 The nurse's area should be retrofitted with additional exhaust air to minimize cross-contamination of airborne viruses and particulates.

CSES.HVAC.06 Elevator Machine Room should be exhausted as required by International Mechanical Code.

CSES.HVAC.07 Portions of the existing pneumatic ATC system should be integrated into the DDC system and the existing pneumatic system and air compressor should be abandoned.

CSES.HVAC.08 The music area should have its unit ventilators replaced with a similar system capable of providing dehumidification. Under-window unit ventilators with hot gas reheat are recommended which would require the replacement of the existing unit ventilators and their associated condensing units.

CSES.HVAC.09 Portions of the corridors were noted to be without ventilation as required by governing codes. This should be addressed in the next building-wide renovation. The Corridors were also noted as "cold in the winter" by District staff.

CSES.HVAC.10 Space utilized as IDF were observed without cooling systems and should be considered to have ductless split-systems or at minimum exhaust systems to limit high temperatures.

ELECTRICAL

Electrical Distribution

The electrical service drops underground to indoor Non-PCB pot-type transformers located inside a transformer room. The service utilizes bus duct to continue into the main electrical room into an old Westinghouse Main breaker section that is believed to be being used as a junction box. The main electrical gear lineup consists of the old Westinghouse junction box into a Siemens 1000A 208/120V main breaker section/distribution

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Old Westinghouse panelboard



Old abandoned 20KW interior gasoline generator

section and a 208/120V distribution section dated 1998. The distribution equipment was observed to be manufactured by Square D, Westinghouse, and Siemens. It is recommended that some of the older equipment manufactured by Westinghouse be replaced with new.

Emergency Generator

There is an old abandoned Onan 20KW gasoline generator located inside the electrical room. There is an old Onan 100A 120.208V transfer switch and disconnect.

It is recommended that the existing abandoned generator and associated transfer switch be removed and a new generator, two automatic transfer switches, one manual transfer switch, and a temporary generator hookup is installed. Two automatic transfer switches are required to separate life safety lighting loads from other non-life safety loads. A manual transfer switch and temporary generator hookup is code required to hookup a portable generator to bypass the permanent generator for maintenance purposes.

Lighting System

The lighting inside the building was noted to be mostly LED replacement tubes for existing fluorescent fixtures. It was noted that there is still some T8 fluorescent tubes located in fixtures throughout the building. The majority of the building utilizes recessed 2x4 lensed troffers and a mixture of 1x4 and 2x4 surface mounted wrap around fixtures. Some automatic shut-off controls (occupancy) sensors were observed in the building as required by current energy codes. Some rooms were not observed to have lighting control sensors in them. It is recommended to expand the existing system to include automatic controls for the entire building.

Building exterior lighting appears to be LED fixtures. The fixtures appear to be newer and in good condition.

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Surface mounted wrap around fixtures

Emergency lighting was noted to be battery packs. Battery packs with remote heads were observed throughout the building.

The majority of lighting fixtures observed are in working condition. While a majority of the lighting has undergone LED replacement tubes/bulbs consideration should be given that the entire building be replaced with LED fixtures for reduced maintenance and energy savings. Consideration should also be given to expanding the existing lighting control system to automatically shutoff lighting when the areas are unoccupied.

Data/Network System

The data network solution observed is 6. There are multiple floor mounted racks and some wall mounted switches located throughout the building for network distribution. The rack locations observed did not appear to have some sort of wall mounted mini split cooling system. There are some wireless access points located throughout the building. There was some coaxial television observed that was noted to be mostly abandoned. It is recommended that additional wireless access points and additional data drops should be considered for future upgrades. The coaxial television should be removed if it is not in use.

Fire Alarm System

The existing fire alarm system is a Simplex 4020 system that is horn/strobe activated. Smoke detection and notification devices are provided throughout the building. The system is in good condition, however current code requires voice notification and the existing system utilizes horns/tone notification. Additionally, this system is no longer supported by Simplex and will require replacement as the system becomes harder to service. Significant renovations or modifications to this system will require the systems be upgraded to the current code.

Intercom/Public Address/Clock System

There are newer Innovation Wireless wall mounted clocks mounted in combination speaker units observed throughout the building. It is anticipated that there are still some Simplex clocks. There is an existing Simplex 2350 master clock system that

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Simplex 4020 fire alarm control panel

appears to still be in use. The existing intercom system utilizes a Simplex 5100 head end and appears to be in adequate condition. It is estimated that the existing PA system is discontinued and may tough to find parts for service. The existing phone system is a Mitel Voice Over IP (VOIP) and appears to be in adequate condition.

It is recommended that the existing public address system be upgraded to an I.P. intercom system. PA system may be approaching end of life soon and shall be replaced as it may be tough to find parts for service. It is recommended that all existing Simplex clocks and Simplex master clock system be removed and replaced with the newer Innovation Wireless clock system.

Building Security System

There is an existing Radionics intrusion system for the building with perimeter door contacts and interior motion detection. The system appears to be in fair condition. The District should review operational and security needs and provide additional motion detection if deficiencies are noted.

The door access control system manufacturer was not observed. There appears to be HID card readers at select exterior doors. The District should review operational and security needs and provide additional door access controls if deficiencies are noted.

There are no security cameras The District should review operational and security needs and provide cameras where desired.

The main office was utilizing AiPhone IX-MV desk model and IX-DA model for the front entrance for communication at the front entrance of the school.



Existing Simplex 5100 public address head end

Issues to consider:

CSES.EL.01 It is recommended that all older Westing House panelboards be replaced with new. It should be noted that the electrical distribution will need to be upgraded if the district desires to add building cooling.

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- CSES.EL.02 Consideration should be given to upgrading classroom lighting with new LED fixtures, and expanding code required automatic lighting controls for reduced maintenance and energy savings.
- CSES.EL.03 It is recommended that an emergency generator, (2) automatic transfer switches, (1) manual transfer switch and a temporary generator hookup be installed for emergency power backup.
- CSES.EL.04 It is recommended that additional wireless access points and additional data drops should be considered for future upgrades. The CATV system and all abandoned cables should be removed if it is no longer active.
- CSES.EL.05 It is recommended that the existing clock and intercom systems be upgraded to newer systems including wireless clock correction and non-centralized I.P. intercom system.
- CSES.EL.06 The District should review operational and security needs for the building and provide additional door access controls where deficiencies are noted. In addition, networked surveillance cameras should be provided for the building where desired.

PLUMBING

Domestic Water Service

The building has been provided with public domestic water service. The main 4" Domestic water service for the building is located in a Storage Room in the lower level and includes gate valve shutoffs. A meter pit located in the upper parking area was observed and is assumed to contain the meter and service backflow preventer.

Septic/Sewage

The building drainage system is served by public sewer system. A Sewage ejector pump station has been provided to serve the boiler room drains and a sewage ejector pump located in a chase of the existing lower level art room serves the sink drains

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Existing Domestic Water Service Meter Pit

of the art room. Most of the existing sanitary drainage piping is assumed to be original to the original building construction; however, some areas of new PVC piping were observed. The district did not report any chronic drainage issues associated with the sanitary drainage system.

Domestic Water Heating

The existing domestic water heating system serving the building includes a 600 MBH gas fired Laars Teledyne hot water boiler with storage tank. The tags on the water heaters indicated they were installed in 2007. The unit appeared to be in fair condition but had signs of leaking joints on associated piping and has reached the expected 15-year service life for the heater. The hot water system includes hot water recirculation, master mixing valve, and expansion tank.



Existing Domestic Water Heater and Observed Corrosion

Fuel Gas System

The school has been provided with natural gas service supplied by UGI. A single service has been provided to serve building heating, domestic water heating, and kitchen equipment. The existing meter is an older style, large diaphragm meter and has been provided with a partial security enclosure.

Plumbing Fixtures

Plumbing fixtures within the more recently renovated Gang Toilet rooms include floor mounted water closets and wall hung urinals with manual flush valves, and wall hung multi-lavatory stations with mechanical metered faucets. Older generation toilet rooms include more dated plumbing fixtures including floor mounted stall type urinals. In general, most fixtures are in fair or good condition; however, fixtures in the older generation toilet rooms are dated. These toilet room installations do not comply with current ADA/ANSI A117.1 accessibility requirements. Lavatories have not been provided with thermostatic tempering valves required by current plumbing code.



Existing Natural Gas Service

Plumbing fixtures within the individual kindergarten classroom toilet rooms include floor mounted “Baby Bowl” water closets and wall hung lavatories installed at Juvenile heights. The fixtures are generally in fair condition but the installations do not

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comply with all current ADA/ANSI A117.1 accessibility requirements.



Classroom sinks are generally in fair condition; however, not all comply with ADA/ANSI A117.1 requirements. Art room sinks include solids interceptors/plaster traps on the drainage piping.

Most existing Electric Water Coolers are in good or fair condition; however, they do not comply with ADA/ANSI A117.1.



Existing janitor service sinks are wall and not easily used for emptying buckets or other Janitorial functions, and the utility faucets are in poor condition. Auxiliary hose connections have not been provided for connections to cleaning solution dispensers. No emergency eyewash or other OSHA required personal safety equipment was observed within the janitor room.



Existing Gang Toilet Plumbing Fixtures



Existing Plumbing Fixtures in Classrooms

Some kitchen food prep sinks and the dishwasher have been installed without code required indirect drainage to prevent backup of sanitary drainage into food prep bowls. Drainage piping in several sinks is also installed without the code required venting which could lead to siphoning of the traps. Existing epoxy coated floor sinks have begun to chip and corrode which is a less sanitary installation and could be cited by local DOH inspectors.

Existing exterior non-freeze wall hydrants lack lockable cover to prevent tampering.

Sanitary Drainage

Portions of the below slab sanitary drainage piping serving the building is believed to be remaining from the original building construction and condition is unknown. The existing gas tight cover for the sewage ejector pump in the boiler room has been removed and not replaced. The existing sewage ejector pump located in the chase within the Art room is difficult to access for maintenance.



Existing Non-ADA Classroom Sinks

Kitchen dishwashing sink drain has been provided with an individual steel grease trap installed adjacent to the sink. No condition issues were reported by the school district and the

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school district confirmed the grease traps are emptied and maintained regularly.

Roof Drainage

The existing roof is composed primarily of flat EPDM roof construction with gravel stop edging. The roof drains appeared to be in good condition and clear of debris; however, some ponding was observed near roof edges. No emergency overflow scuppers or roof drains have been provided.

Domestic Water Supply System

Domestic water supply piping is primarily copper piping installed throughout the original building construction and future renovation timeframes. The existing piping system and fixture trim was installed prior to enactment of the 2011 “Reduction of Lead in Drinking Water Act” which has set stricter standards for lead content in materials used within potable water piping systems.

Fire Protection Systems

An automatic fire protection/sprinkler system has not been provided.

The exhaust hood within the kitchen has been provided with an Ansul fire suppression system.

Issues to consider:

CSES.P.01 The central domestic water heater is at the end of its expected useful life and corroded fittings were observed on interconnecting piping. The water heater should be replaced as soon as possible. Lack of a duplex water heater installation would cause a complete loss of hot water in the event of a failure.

CSES.P.02 Overall most plumbing fixtures within the building are in good or fair condition but do not comply with all current ADA/ANSI A117.1 requirements. Any replacement of the fixtures should address all ADA/Accessibility issues as well as current water and energy conservation requirements. Consideration should be given to renovations permitting new



Existing Dishwash Sink without Indirect Drain Connection and Corroded Floor Sink



Existing Grease Trap



Existing Roof Drain and Ponding at Roof Edge

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plumbing fixture installation in accordance with
ADA/ANSI A117.1 accessible requirements.

- CSES.P.03 Consider installing electronic hands-free metering faucets with Lav Shield covers below existing lavatory installations to prevent tampering with exposed faucet supplies and electronics.
- CSES.P.04 ASSE certified tempering valves should be provided at all handwashing fixtures for scald protection as required by current plumbing codes.
- CSES.P.05 Consider installing hands-free sensor operated flush valves on public use toilets.
- CSES.P.06 Existing electric water cooler installations should be upgrade to bi-level ADA/ANSI compliant with lead reduction filters and bottle filling stations. The potable water distribution system should be tested for lead. Lead reduction filters should be installed at all drinking fountains and potable water outlets intended for human consumption as required based on test results.
- CSES.P.07 Domestic water supply piping within the original construction area should be inspected for internal condition and replaced as required. All domestic hot water piping should be insulated to comply with current energy codes. Domestic cold water piping should be insulated to prevent condensation and potential mold growth in concealed locations.
- CSES.P.08 Future connection of a natural gas emergency generator to the existing gas supply should be connected upstream of the main building shutoff valve in accordance with NFPA-101 Life Safety requirements. The existing pipe sizing and service/regulator should be evaluated to determine the cause of the intermittent low pressure experienced at the emergency generator.
- CSES.P.09 Drainage piping, especially original to the original building construction should be inspected for collapsed or broken section of pipes. Any existing piping with connections to new renovations should be flushed and inspected to verify condition. Based on reports of poor

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condition, complete replacement of the sanitary drainage piping below slab should be considered.

CSES.P.10 Consider adding locking covers to non-freeze wall hydrants to prevent tampering and vandalism. Janitor closets should be renovated to include floor mounted mop receptors, and emergency eye wash system to comply with OSHA requirements. Auxiliary hose connections should be provided for connection of cleaning solution equipment to avoid connecting the equipment directly to the utility faucet. The addition of wash down boxes in gang toilet rooms should be looked into to aid in the cleaning of the toilet rooms.

CSES.P.11 Renovations to the kitchen would require new plumbing below slab. Floor sinks and indirect drain connections should be provided for all food prep and dishwashing equipment as required by current plumbing codes. Corroded epoxy coated floor sinks and indirect waste receptors should be replaced with stainless steel floor sinks. Exposed drainage piping should be replaced with sanitary stainless steel or chrome plated copper corrosion resistant piping.

CSES.P.12 A building-wide automatic sprinkler system should be provided as part of any significant renovation project.

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Newton-Ransom Elementary School
Front Elevation

HISTORY

Newton-Ransom Elementary School was built in 1995 as a pod school. There have been no additions onto the building and no major renovations since its construction. Almost all systems are original to the building. The school is one-story.

BUILDING STATISTICS	
Size of Building	approximately 36,800 SF
Building Footprint	approximately 36,800 SF
Size of Site	approximately 82.7 acres - shared
2021-2022 Enrollment	196 students
Grades	Kindergarten – Fourth Grade
Kindergarten	34 students
First Grade	41 students
Second Grade	33 students
Third Grade	46 students
Fourth Grade	42 students

The scope of this report is limited to items identified as problems by the user groups.

SITE

Vehicular Circulation and Parking

There are two separate lots on the site. One is for bus drop-off and pick-up; the other is for visitor and staff parking. There is also a paved area in the back of the school with a few parking spaces for staff as well as a hard play area. The layout of the site and drive lanes does not separate the buses from the cars that are dropping off. This presents problems during the pick-up and drop-off process.



Overall site at Newton-Ransom

There are light poles throughout the drives into the site. Some of the poles have severe damage/rust to the bases.

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Cracks in drive to main lot

While Newton-Ransom has a front entry to the main office, a glass breezeway connects the two areas of the buildings. This area should be considered for a fence to secure the perimeter of the building.

Issues to consider:

NRES.S.01 Replace base of exterior light poles.

NRES.S.02 Fence from edge of building to edge of building to block exterior access to breezeway.

Sidewalks and Paving

Sidewalks are in fair condition. Some areas have vegetation growing between the joints. Expansion joint material between building and sidewalk has decayed over time.

The asphalt lots are in fair to poor condition. The bus loop lot is in fair condition with just a few areas of cracking. The staff lot, the rear lot, and the hard play area have a substantial amount of patching and cracking.

Issues to consider:

NRES.S.03 Mill and overlay asphalt within five years.

NRES.S.04 Replace joint where sidewalk and building meet.



Hard play space in rear of building

Play Area

There are two playgrounds. The smaller of the two is adjacent to the Kindergarten classrooms. This play area is fenced and out in the front of the property. The second playground is to the west of the building. This play area is adjacent to the woods and not fenced in.

In both areas, the play equipment is in good condition. The surface of the play is wood mulch.

Issues to consider:

NRES.S.05 Fence play area at the west of the building to create a perimeter for safer play.



Unsecured play area

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BUILDING EXTERIOR

Façade

The façade is primarily comprised of white plaster. The façade is in fair condition. There are signs of cracking in the plaster and areas with some damage.

Issues to consider:

NRES.EX.01 Repair plaster exterior.

Fenestration

Fenestration consists of aluminum windows, aluminum storefront and doors, and aluminum curtainwall. Fenestrations are not insulated.

Issues to consider:

NRES.EX.02 Replace existing windows with new, insulated openings to prevent heat loss/gain.

BUILDING INTERIOR

ADA Compliance

Access into and through the building is compliant with ADA guidelines. There are no steps or ramps throughout.

Most classroom entrances are accessible, however the sinks within the pods and rooms are not ADA compliant.

All toilet rooms throughout the building do not provide the needed clearances, equipment, and fixture heights to meet ADA requirements. The entrances to the gang bathrooms would need to be re-configured to provide ADA access.

Issues to consider:

NRES.BI.01 Replace all sinks in each pod or room to be ADA compliant.

NRES.BI.02 Reconfigure restrooms to provide proper clearances and fixtures for ADA compliance.

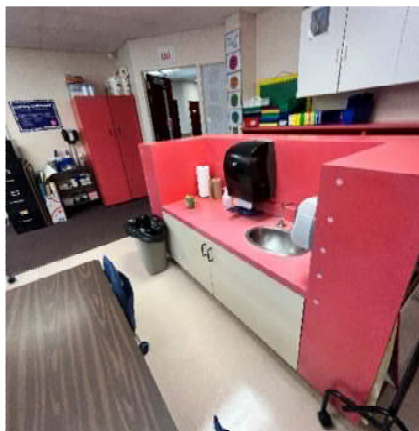
NRES.BI.03 Add vertical grab bars at all toilet locations.



Plaster façade finish



Access to breezeway



Typical sink in classroom

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Typical pod layout

Lobby

The main entrance is visible from the main office but is not connected. A connected vestibule/main office is recommended, but not required.

Administration

The administration offices have carpet, painted walls, and acoustical ceiling tile (ACT) throughout. The finishes are in fair condition.



Typical classroom layout

Classrooms

Kindergarten classrooms are located to the left upon entry into the building. The remainder of the classrooms are further into the building and connected by their respective pods. There are four pods (Grades 1 through 4), each having three classrooms. Cubbies and casework is provided in the pod. Casework and sinks are provided within the classrooms. Classrooms have carpet painted walls, and ACT ceiling. Finishes are in fair condition.

Corridors

Corridors have carpet, painted walls, and acoustical ceiling tile (ACT) ceiling throughout. The ceilings and walls are in fair condition. The carpet is in poor condition.

Issues to consider:

NRES.BI.04 Replace carpet in corridors with a more durable material like VCT.



Typical corridor

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Multi-purpose room with stage.

Multi-purpose Room

The multi-purpose room functions as a cafeteria, gym, and auditorium. The kitchen and storage is adjacent with direct access into the space. The stage is a folding stage system, which is a packable stage with risers built in.



Library

Library

The library space has carpet and acoustic (ACT) ceiling. There is an attached computer lab, which now houses the STEM curriculum. The library space is large and underutilized. The STEM room is not conducive to the curriculum taught at the elementary level.

Issues to consider:

NRES.BI.05 Renovate library and computer lab into one space for both activities that reflects the new curriculum.

HVAC

Central Heating Plant

Building hot water is generated by two dual-fuel (natural gas and oil) Weil McClain Series 88 cast iron boilers. The boilers are original to the building and each has a capacity of 1,419 MBH. The boilers are in fair condition but have exceeded their expected life cycles. Each boiler has a PowerFlame dual fuel burner. The District has abandoned the oil system at this building and it is no longer operational as a dual-fuel system. The breeching and accessories associated with the boilers are in poor condition. There are two base mounted distribution pumps that are in poor condition and there are no VFD's associated with the pump motors. The hot water piping, valving, and insulation appear to be in poor condition and as a general statement, the hot water plant is due for a replacement.



Heating System

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Existing packaged rooftop unit

Central Cooling Plant

The building does not have a central chilled water plant. Select areas (Library, Nurse Suite, Administration, Gymnasium/Cafeteria, Classroom Open Pods and Computer Classroom) are conditioned by packaged rooftop units, split DX unit ventilators, or rooftop heat pump units.

Admin, Nurse, Guidance, Library & Specialty Classroom

The Library, Nurse Suite, Administration, and the Open Pod area are each served through a ducted system associated with a rooftop heat pump or air conditioning system. The units are operable, but they are original to the building, have exceeded their expected services lives, and should be replaced.

Ducted supply and return systems are present for each system. Exhaust systems in the Nurse area appeared inadequate for the use of the space.

Gymnasium and Cafeteria

The Gymnasium and Cafeteria are served by four packaged rooftop air handling units. The units contain mixing boxes, filters, DX cooling coils, external hot water-cooling coils, and supply fans. The units are in fair condition; however, they were installed in 1995 and have exceeded their expected service lives. Exposed ducts provide supply air to the space through round diffusers and the return system is open. External relief ventilators are present on the roof and in good condition.

Art Classroom

The Art Classroom is served by a typical Classroom unit ventilator (see Classroom summary). There is no exhaust system present and it is now required by current mechanical codes.

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Existing grease hood

Kitchen

The Kitchen is served by a supply fan providing unconditioned (ventilation) air directly through the hood. Heating is provided by a cabinet heater. Air conditioning is not present.

The Kitchen exhaust hood is connected to an upblast grease fan located on the roof. An Ansul system was observed within portions of the hood to protect certain equipment types as required by code. A dedicated exhaust fan serves the dishwasher condensate hood. The fans and grease hood appear to be in fair condition.



Existing under-window vertical unit ventilator

Classrooms, Corridors & Support Spaces

Each Classroom contains an under-window vertical unit ventilator (or in-ceiling horizontal unit ventilator) with a hot water heating coil, supply fan, and filters. The Classrooms are not air conditioned. The Classroom unit ventilators are in fair condition but they have limitations in that they cannot cool or dehumidify their spaces. Transfer air systems are present to rooftop relief ventilators. Perimeter hot water radiation is present behind the Classroom casework. The open area of the Classroom Pod wing is conditioned by a packaged rooftop unit. This unit has exceeded its expected service life. Server racks were identified in spaces utilized as IDF's without a dedicated cooling or exhaust system.

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Terminal Heating Equipment

Terminal heating equipment such as baseboard radiation, convectors and cabinet heaters are present to heat auxiliary spaces and to provide comfort heating to several occupied spaces. All components were installed in 1995. The expected service life for these heaters ranges from 20-25 years but all visible devices appeared in good condition and should be expected to function well past this period.

Exhaust Air Systems

Exhaust fans were observed serving the Toilet Rooms and Janitor's Closets and appeared to be in conformance with the requirements of the International Mechanical Code. The fans are believed to be in working order and appeared to be in fair condition. The Art Room does not have an exhaust system that is required by current codes. The ASHRAE Median Service Life for exhaust fans is 20 years.

Ductwork and Piping Systems

The supply, return and exhaust air ductwork appeared to be galvanized steel sheet metal and in acceptable condition. The ASHRAE Median Service Life for ductwork is 30 years.

Hot water piping and insulation observed outside of the boiler room appeared to be in fair condition. A majority of the horizontal runs are present behind the classroom casework and could not be observed.

Automatic Temperature Controls

The building operates off a central Siemens Apogee Building Automation System. The Apogee system is no longer supported by Siemens and should be updated.

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Issues to consider:

NRES.HVAC.01 Consider a major HVAC renovation that will provide cooling and the ability to dehumidify for all occupied spaces. Viable systems would include 4-pipe vertical unit ventilators or supplementing the existing systems with roof-mounted DX recovery units.

NRES.HVAC.02 Consideration should be given to the installation of a new air-cooled chiller for 4-pipe options. Pending system choice, ductwork could be provided in each Classroom to improve air distribution, reduce noise, and adequately ventilate in accordance with today's standards.

NRES.HVAC.03 If a major HVAC renovation (described above) does not take place, consider replacing all packaged rooftop units and heat pump units within 5 years. The units have exceeded their expected life cycles.

NRES.HVAC.04 Consider replacing the existing boiler plant in 5 years with new, high-efficiency gas-fired condensing style boilers. Replace existing pumps, piping and accessories and provide VFD's as part of this upgrade.

NRES.HVAC.05 All exhaust fans and auxiliary heaters should be replaced and serviced as needed.

NRES.HVAC.06 The Art Classroom and Nurse Area should be furnished dedicated exhaust systems to meet latest code requirements.

NRES.HVAC.07 Upgrade Siemens Apogee system with Desigo.

NRES.HVAC.08 Consider installation of dedicated ductless split-system cooling units for IDF spaces.

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ELECTRICAL

Electrical Service

The electrical service originates from a PP&L pole. The electrical service drops underground, from the PP&L pole to an exterior PP&L owned transformer located near the main mechanical room. The transformers feed a CT cabinet and a 1000A 120/208V 3PH 4W distribution panelboard in the main mechanical room. There is storage in front of the distribution panel which is not code compliant. All 208V electrical equipment requires a minimum 3 feet of clearance in front. The distribution panelboard feeds multiple smaller panelboards throughout the building. All distribution equipment observed was manufacturer by GE with an install date of 1995. The gear is in good condition.



Main Distribution Panel with storage in front

Emergency System

There is no emergency generator system. All emergency lighting is supplied via emergency battery packs and remote heads. There are only single remote heads above egress doors on the exterior, current code requires redundancy.

Lighting System

The lighting observed inside the building is a mixture of fluorescent technologies. The building has a mixture of lensed 2x4, parabolic 2x4, pendant type, and industrial linear fixtures. The majority of the building utilizes fluorescent type fixtures. Some automatic shut-off controls (occupancy) sensors were observed in the building. Some rooms were not observed to have lighting control sensors in them. It is recommended to expand the existing system to include automatic controls for the entire building as well as daylight sensors where required.

Building exterior lighting appears to be LED fixtures. Some fixtures appear to be newer and in good condition. Other fixtures appear to be worn and should be replaced.

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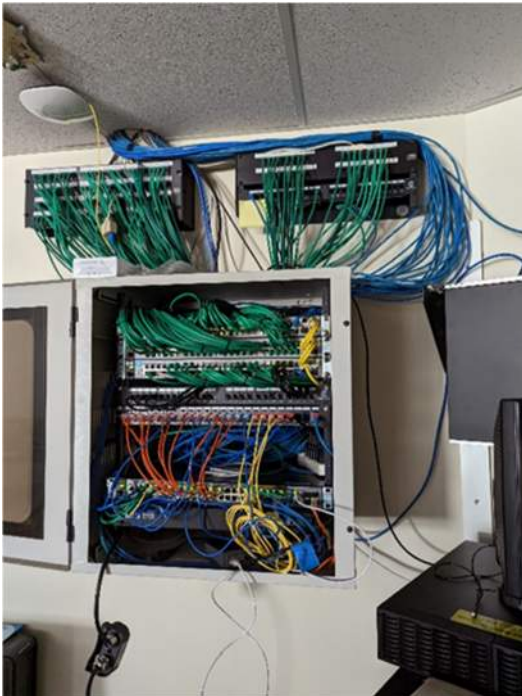
Emergency lighting is supplied from the emergency generator.

Most lighting fixtures observed are in working condition. Consideration should be given that the entire building be replaced with LED fixtures for reduced maintenance and energy savings. Consideration should also be given to expanding or replacing the existing lighting control system to automatically shutoff lighting when the areas are unoccupied as required by current codes.

Data/Network System

The data network solution observed is a combination of cat 5e and cat 6. There are multiple wall mounted racks located throughout the building for network distribution. The rack locations observed appeared to have no cooling system. There are wireless access points located throughout the building. There is an old coaxial cable televisions (CATV) system observed for the building which was undetermined if it was in use.

It is recommended that additional wireless access points and additional data drops should be considered for future upgrades. The CATV system and all abandoned cables should be removed if it is no longer in use.



Typical Data Rack

Fire Alarm

The existing fire alarm system is a Simplex 4020 system. Smoke detection and notification devices are provided throughout the building. The system is in fair condition, however current code requires voice notification, and the existing system utilizes horns/tome notification. Significant renovations or modifications to this system will require the systems be upgraded to the current code.



Simplex 4020 fire alarm control panel

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Intercom/Public Address/Clock System

Clock/speaker units and ceiling mounted speakers were observed throughout the building. The clocks are National Time and headend clock control is Dukane. The existing intercom system utilizes a Dukane head end and appears to be in adequate condition. System appears to have been installed in 1995. The existing phone system is a VOIP system and appears to be in adequate condition.



Existing wall mounted PA rack

It is recommended that the existing public address system be upgraded to an I.P. intercom system. PA system will be approaching end of life soon and shall be replaced in 3-5 years.

Building Security System

There is an existing intrusion system for the building with perimeter door contacts. The system appears to be in fair condition.

The door access control utilizes Genetec Synergis Cloud Link which is a wired system. The District should review operational and security needs and provide additional door access controls if deficiencies are noted.

There were no cameras observed inside the building. The District should review operational and security needs and provide cameras where desired.

The main office was utilizing AiPhone IX series master and IX-DA model for the front entrance for communication at the front entrance of the school.

Issues to consider:

NRES.EL.01 Consideration should be given to adding an emergency generator system to the building to backup both code required system such as emergency lighting and non-legally required systems such as the heating plant.

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NRES.EL.02 All lighting and lighting controls should be replaced/updated to LED lighting with new code compliant controls and dimming to realize maintenance and energy savings.

NRES.EL.03 It is recommended that additional wireless access points and additional data drops should be considered for future upgrades. The CATV system and all abandoned cables should be removed if it is no longer active.

NRES.EL.04 It is recommended that the existing clock and intercom systems be upgraded to newer systems including wireless clock correction and non-centralized I.P. intercom system.

NRES.EL.05 The District should review operational and security needs for the building and provide additional door access controls where deficiencies are noted. In addition, networked surveillance cameras should be provided for the building where desired.

PLUMBING

Domestic Water Service

The building has been provided with public domestic water service. The main 4" combination Domestic water/ Fire Protection service for the building is located in the Boiler room adjacent to the Kitchen and includes gate valve main shutoff. A meter pit located on the building exterior is assumed to contain the meter and main service backflow preventer.

Septic/Sewage

The building drainage system is served by public sewer system. The district noted that the sanitary sewer drainage is treated at the State Hospital facility located adjacent to the property and is likely at maximum capacity. The district did not report any chronic drainage issues associated with the sanitary drainage system.



Existing Fire Protection/
Domestic Water Service Entrance

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Existing Domestic Water Heater and Gas Service

Domestic Water Heating

The existing domestic water heating system serving the building includes a 40 MBH gas fired American Water Heaters storage type water heater. The labelling on the water heaters indicated it was installed in 2020 and it is new condition. The hot water system includes hot water recirculation, two master mixing valves installed in parallel, and expansion tank.



Existing Gang Toilet Plumbing Fixtures

Fuel Gas System

The school has been provided with natural gas service supplied by UGI. The 2psi service has been provided to serve building heating, domestic water heating, and kitchen equipment. The service/meter has been provided with a chain link enclosure for security.

Plumbing Fixtures

Plumbing fixtures within Gang Toilet rooms include floor mounted water closets and wall hung urinals with sensor operated flush valves, and wall hung lavatories with manual faucets or floor mounted multi-station lavatory systems with mechanically metered faucets. In general, most fixtures are in good condition. These toilet room installations do not comply with all current ADA/ANSI A117.1 accessibility requirements. Lavatories have not been provided with thermostatic tempering valves required by current plumbing code.



Existing Non-ADA Classroom Toilet Rooms

Plumbing fixtures within the individual Kindergarten classroom toilet rooms include floor mounted “Baby Bowl” water closets and wall hung lavatories installed at Juvenile heights. The fixtures are generally in good condition but the installations do not comply with all current ADA/ANSI A117.1 accessibility requirements.



Existing Electric Water Coolers



Existing Janitor Service Sinks

Existing classroom sinks are generally in fair condition; however, not all comply with ADA/ANSI A117.1 accessibility requirements. Art room sinks include solids interceptors/plaster traps on the drainage piping.

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Existing Dishwash Sink without Indirect Drain Connection and Corroded Floor Sink



Existing Non-Freeze Wall Hydrant



Existing Grease Trap

Most existing Electric Water Coolers are in good condition and have been provided with bottle filling stations; however, they do not comply with ADA/ANSI A117.1 accessibility requirements.

Existing janitor service sinks are floor mounted, in good condition, and adequate for Janitorial functions. Auxiliary hose connections have not been provided for connections to cleaning solution dispensers. No emergency eyewash or other OSHA required personal safety equipment was observed within the janitor room.

The triple bowl sink and the dishwasher have been installed without code required indirect drainage to prevent backup of sanitary drainage into the fixtures.

Existing exterior non-freeze wall hydrants lack lockable cover to prevent tampering.

Sanitary Drainage

The below slab sanitary drainage piping serving the building is believed to be remaining from the original building construction and condition is unknown. The District did not report any chronic drainage issues with the existing sanitary piping.

Kitchen area drainage has been provided with individual steel grease traps recessed within the kitchen floor. No condition issues were reported by the school district and the school district confirmed the grease traps are emptied and maintained regularly.

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*Existing Roof Drain and
Ponding at Roof Edge*

Roof Drainage

The existing roof is composed primarily of flat EPDM roof construction with gravel stop and/or low parapet edging. The roof drains appeared to be in good condition but some are becoming clogged with debris and some ponding was observed near roof edges. Emergency overflow standpipes have been provided and are connected into the primary drainage system.

Domestic Water Supply System

Domestic water supply piping is primarily copper piping installed throughout the original building construction and future renovation timeframes. The existing piping system and fixture trim was installed prior to enactment of the 2011 “Reduction of Lead in Drinking Water Act” which has set stricter standards for lead content in materials used within potable water piping systems.

Fire Protection

A limited fire protection/sprinkler system has been provided in the Storage room adjacent to the Multipurpose room.

The exhaust hood within the Kitchen has been provided with an Ansul fire suppression system.

Issues to consider:

NRES.P.01 Overall most plumbing fixtures within the building are in good condition but do not comply with all current ADA/ANSI A117.1 requirements. Any replacement of the fixtures should address all ADA/Accessibility issues as well as current water and energy conservation requirements.

NRES.P.02 ASSE certified tempering valves should be provided at all handwashing fixtures for scald protection as required by current plumbing codes.

NRES.P.03 Existing electric water cooler installations should be upgrade to bi-level ADA/ANSI compliant

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installations and be provided with lead reduction filters and bottle filling stations.

NRES.P.04 The potable water distribution system should be tested for lead. Lead reduction filters should be installed at all drinking fountains and potable water outlets intended for human consumption as required based on test results.

NRES.P.05 Consider providing existing non-freeze wall hydrants with locking covers to prevent tampering and vandalism.

NRES.P.06 Provide emergency/safety plumbing fixtures in any area where caustic, corrosive or injurious chemicals are used or dispensed in accordance with OSHA regulations and ANSI Z358.1. Review MSDS information to determine required emergency fixtures. Possible locations could include mechanical rooms with chemical treatment equipment, Janitor/Custodial closets, Nurse's area, etc.

NRES.P.07 Janitor closets should be renovated to include an emergency eye wash system to comply with OSHA requirements. Auxiliary hose connections should be provided for connection of cleaning solution equipment to avoid connecting the equipment directly to the utility faucet.

NRES.P.08 Renovations to the kitchen would require new plumbing below slab. Floor sinks and indirect drain connections should be provided for all food prep and dishwashing equipment as required by current plumbing codes.

NRES.P.09 An automatic sprinkler system should be provided throughout the building to attain a "fully sprinklered" building as part of any significant future renovation project.

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Existing Facilities Report – South Abington Elementary School
640 Northern Blvd, South Abington Township, PA 18411



South Abington Elementary School
Front Elevation

HISTORY

South Abington Elementary School was built in 1955 as a one-story elementary school. The building was renovated in 1999 with work to the interior and building systems.

BUILDING STATISTICS	
Size of Building	approximately 37,800 SF
Building Footprint	approximately 37,800 SF
Size of Site	approximately 5 acres
2021-2022 Enrollment	289 students
Grades	Kindergarten – Fourth Grade
Kindergarten	56 students
First Grade	52 students
Second Grade	57 students
Third Grade	67 students
Fourth Grade	57 students



One drive into South Abington site

SITE

Vehicular Circulation and Parking

There is one driveway that provides two-way access into the site. All parents, staff, and buses enter and exit the same way. The drive is also an entrance for the park that is located to the west of the school. This presents issues with traffic, especially during drop off and pick up as well as during events.

There is a very small parking lot for visitors and staff. The adjacent park has the majority of the parking on the site.

Sidewalks and Paving

Sidewalks are in fair condition. Areas are currently being repaired and replaced. The drives and parking lots are in fair condition but are showing signs of aging. There are some cracks throughout paved areas.

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Cracking in parking area

Issues to consider:

SAES.S.01 Mill and overlay asphalt within ten years.

Play Area

There are multiple play areas on the site. One is fenced in entirely. The hard play has a partial fence. The other two play areas (swings and larger equipment) don't have a fence. The play equipment is in good condition. The hard play area is in good condition. The mulched play areas are in need of some lawn maintenance and re-mulching.

SAES.S.02 Weed and re-mulch soft play areas.

Floodplain

The entire property at South Abington Elementary is in the 100-year floodplain. This is a concern for the existing building for potential flood damage. The flood plain also restricts any addition or development on the site.

SAES.S.03 No expansion to the building could be housed on this site.

BUILDING EXTERIOR

Façade

The façade is primarily comprised of red brick and white plaster. The façade is in fair condition. There are some areas of the plaster that should be cleaned, but the façade is in otherwise good condition.

SAES.BX.01 Clean exterior.

Fenestration

Fenestration consists of aluminum windows and aluminum storefront and doors. All fenestration systems appear to be in good condition.



Cracks and damage at hard play area



*This graphic shows in blue the 100-year flood plain;
The building is seen in the middle of the image*

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BUILDING INTERIOR

ADA Compliance

Access into and through the building is compliant with ADA guidelines. The building is one-story; the wing of the multi-purpose room is at a different elevation than the front door. A ramp connects the two levels of the building.

Most classroom entrances do not have the ADA compliant door clearance. The classrooms also do not have ADA compliant sink fixtures.

All toilet rooms throughout the building do not provide the needed clearances, equipment, and fixture heights to meet ADA requirements. The entrances to the gang bathrooms would need to be re-configured to provide ADA access.

Issues to consider:

SAES.BI.01 Replace all sinks in classrooms to provide ADA compliance.

SAES.BI.02 Reconfigure classroom entrances to provide 18" clear on the latch side of the door.

SAES.BI.03 Reconfigure restrooms to provide proper clearances and fixtures for ADA compliance.

Administration

The entry vestibule into the school is connected to the main office. A visitor could then access the lobby / building after going through the administration suite.

The administration offices have carpet, painted walls, and acoustical ceiling tile (ACT) ceiling throughout. The finishes are in fair condition.



Toilet stall within gang bathrooms



Entry to gang bathrooms



Typical sink in classroom

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Typical classroom

Classrooms

Classrooms have carpet, painted walls, and ACT ceiling. Carpet is in fair condition. Some areas have signs of failing adhesive, age, and stains.

Issues to consider:

SAES.BI.04 Replace carpet in classrooms.

Corridors

Corridors have carpet, painted walls, and acoustical ceiling tile (ACT) ceiling throughout. The ceilings and walls are in fair condition. The carpet is in poor condition.

Issues to consider:

SAES.BI.05 Replace carpet in corridors with a more durable material like VCT.



Typical corridor

Multi-Purpose Room

The multi-purpose room has wood flooring, painted CMU walls, and an open ceiling. The kitchen for serving is adjacent. The stage is a folding stage system, which is a packable stage with risers built in. The finishes are in good condition.



Multi-purpose room

Library

The library space has carpet, painted wall, acoustic (ACT) ceiling, and a large skylight. The finishes are in good condition, but the layout and furnishing do not fit the current STEM and library curriculum.

Issues to consider:

SAES.BI.06 Renovate library for a more flexible, STEM driven environment.



Library

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HVAC

Central Heating Plant



Existing Lars Teledyne cast-iron natural gas boiler

Building hot water is generated by two natural gas-fired Teledyne Laars cast iron boilers. The boilers were installed in 1999 and each has a capacity of 1,158 MBH. The boilers are in fair condition. The breeching and accessories associated with the boilers are in good condition. There are two base mounted, 2 HP distribution pumps that are in fair condition and there are no VFD's associated with the pump motors. The hot water piping and insulation appear to be in good condition.

Central Cooling Plant

The building does not have a central chilled water plant. Select areas (Library, Art, Guidance, Nurse Suite, Specialty Classrooms, Administration, Gymnasium/Cafeteria) are conditioned by packaged rooftop units or rooftop heat pump units.



Existing packaged rooftop unit (DX cooling & gas furnace)

Administration, Nurse Suite, Guidance, Library & Specialty Classroom:

The administration, nurse suite, guidance, library and specialty classrooms are each served through a ducted system associated with a rooftop heat pump. The heat pump units are in fair condition, however, they were installed in 1999 and have exceeded their expected service lives. The units consist of a mixing box, DX heat pump coil, electric heating coil, and a supply fan.

Ducted supply and return systems are present for each system. Exhaust systems in the nurse area appeared adequate for the use of the space.

Gymnasium and Cafeteria:

The gymnasium and cafeteria are served by four packaged rooftop air handling units. The units contain mixing boxes, filters, DX cooling coils, gas furnaces, and supply fans. The units are in fair condition, however, they were installed in 1999 and have exceeded their expected service lives. Exposed ducts provide supply air to the space through round diffusers and the return system is open. External relief ventilators are present on the roof and in good condition.

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Art Classroom:

The art classroom is served by a packaged rooftop air handling unit. The unit contains a mixing box, filter, DX cooling coil, gas furnace, and supply fan. The unit is in fair condition, however, it was installed in 1999 and has exceeded its expected service life.

Ducted supply and return systems are present. There is no exhaust system present, and it is now required by current mechanical codes.



Existing Kitchen hood exhaust fan (EF-5)

Kitchen:

The kitchen is served by a supply fan providing unconditioned (ventilation) air. Heating is provided by a cabinet heater. Air conditioning is not present.

The kitchen exhaust hood is connected to an upblast grease fan located on the roof. An ansul system was observed within portions of the hood to protect certain equipment types as required by code. A dedicated exhaust fan serves the dishwasher condensate hood. The fans and grease hood appear to be in fair condition.

Classrooms, Corridors & Support Spaces:

The Classrooms and Corridors were renovated in 1999. Each Classroom contains an under-window vertical unit ventilator (or in-ceiling horizontal unit ventilator) with a hot water heating coil, supply fan, and filters. Except those mentioned above, the Classrooms are not air conditioned. Ventilation air is ducted into the Corridors through rooftop gas furnaces, also installed in 1999. The Classroom unit ventilators are in fair condition but they have limitations in that they cannot cool or dehumidify their spaces. Transfer air systems are present to rooftop relief ventilators that were replaced in 1999. Perimeter hot water radiation is present behind the Classroom casework. The Corridor rooftop units are in fair condition but have exceeded their expected service lives. Server racks were identified in spaces utilized as IDF's without a dedicated cooling or exhaust system.



Existing ceiling-mounted horizontal unit ventilator

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Terminal Heating Equipment:

Terminal heating equipment such as baseboard radiation, convectors and cabinet heaters are present to heat auxiliary spaces and to provide comfort heating to several occupied spaces. All components were replaced in 1999. The expected service life for these heaters ranges from 20-25 years but all visible devices appeared in good condition and should be expected to function well past this period.

Exhaust Air Systems:

Exhaust fans were observed serving the Toilet Rooms and appeared to be in conformance with the requirements of the International Mechanical Code. The fans are believed to be in working order and appeared to be in fair condition. The Art Room, Boiler Room, and main Electric Rooms do not have exhaust systems that are required by current codes. The ASHRAE Median Service Life for exhaust fans is 20 years.

Ductwork & Piping Systems:

The supply, return and exhaust air ductwork appeared to be galvanized steel sheet metal and in acceptable condition. The ASHRAE Median Service Life for ductwork is 30 years.

Hot water piping and insulation observed in appeared to be in fair condition. A majority of the horizontal runs are present behind the classroom casework and could not be observed.

Automatic Temperature Controls:

The building operates off a central Siemens Apogee Building Automation System. The system contains a mixture of DDC (electronic) and pneumatic controls. The pneumatic control system is antiquated and should be replaced. The existing air compressor (serving the pneumatic system) is in good condition. The Apogee system is no longer supported by Siemens and should be updated.

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Issues to consider:

SAES.HVAC.01 Consider a major HVAC renovation that will provide cooling and the ability to dehumidify for all occupied spaces. Viable systems would include 4-pipe vertical unit ventilators, or supplementing the existing systems with roof-mounted DX recovery units.

SAES.HVAC.02 Consideration should be given to the installation of a new air-cooled chiller for 4-pipe options. Pending system choice, ductwork could be provided in each classroom to improve air distribution, reduce noise, and adequately ventilate in accordance with today's standards.

SAES.HVAC.03 If a major HVAC renovation (described above) does not take place, consider replacing all packaged rooftop units and heat pump units within 5 years. The units have exceeded their expected life-cycles.

SAES.HVAC.04 Consider replacing the existing boilers in 5 years with new, high-efficiency gas-fired condensing style boilers. Replace existing pumps and accessories and provide VFD's as part of this upgrade.

SAES.HVAC.05 All exhaust fans and auxiliary heaters should be replaced and serviced as-needed.

SAES.HVAC.06 The art classroom, boiler room and electric room should be furnished dedicated exhaust systems to meet latest code requirements.

SAES.HVAC.07 Replace pneumatic portions of the existing ATC system with new DDC components and interface them into the building-wide Siemens building automation system. Upgrade Siemens Apogee system with Desigo.

SAES.HVAC.08 Consider installation of dedicated ductless split-system cooling units for IDF spaces.

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ELECTRICAL



Typical Panelboard

Electrical Distribution:

The electrical service originates from a PP&L pole. The electrical service drops underground, from the PP&L pole to an exterior PP&L owned transformer located near the main mechanical room. The transformers feeds a CT cabinet and a 1600A 120/208V 3PH 4W distribution panelboard in the main mechanical room. There is storage in front of the distribution panel which is not code compliant. All 208V electrical equipment requires a minimum 3 feet of clearance in front. The distribution panelboard feeds multiple smaller panelboards throughout the building. All distribution equipment observed was manufacturer by Schneider Electric. The gear is in good condition.

Emergency Generator:

There is no emergency generator system. All emergency lighting is supplied via emergency battery packs, remote heads, and a central inverter system. There are only single remote heads above egress doors on the exterior, current code requires redundancy. The inverter is near end of life and should be replaced.



Central Inverter System

Lighting System:

The lighting observed inside the building is a mixture of fluorescent technologies. The building has a mixture of lensed 2x4, pendant type, and industrial linear fixtures. The majority of the building utilizes fluorescent type fixtures. Some automatic shut-off controls (occupancy) sensors were observed in the building. Some rooms were not observed to have lighting control sensors in them. It is recommended to expand the existing system to include automatic controls for the entire building as well as daylight sensors where required.

Building exterior lighting appears to be LED fixtures. Some fixtures appear to be newer and in good condition. Other fixtures appear to be worn and should be replaced.

Emergency lighting is supplied from the emergency generator.

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The majority of lighting fixtures observed are in working condition. Consideration should be given that the entire building be replaced with LED fixtures for reduced maintenance and energy savings. Consideration should also be given to expanding or replacing the existing lighting control system to automatically shutoff lighting when the areas are unoccupied as required by current codes.



Edwards EST2 fire alarm control panel

Data/Network System:

The data network solution observed is a combination of cat 5e and cat 6. There are multiple wall mounted racks located throughout the building for network distribution. The rack locations observed appeared to have no cooling system. There are wireless access points located throughout the building. There is an old coaxial cable televisions (CATV) system observed for the building which was undetermined if it was in use.

It is recommended that additional wireless access points and additional data drops should be considered for future upgrades. The CATV system and all abandoned cables should be removed if it is no longer in use.

Fire Alarm System:

The existing fire alarm system is a Edwards EST2 system. Smoke detection and notification devices are provided throughout the building. The system is in fair condition, however current code requires voice notification and the existing system utilizes horns/tome notification. Significant renovations or modifications to this system will require the systems be upgraded to the current code.

Intercom/Public Address/Clock System:

Clock/speaker units and ceiling mounted speakers were observed throughout the building. The clocks are National Time. The existing intercom system utilizes a Rauland head end and appears to be in adequate condition. System appears to have been installed in the last major renovation. The existing phone system is a VOIP system and appears to be in adequate condition.



Existing PA rack

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It is recommended that the existing PA system be upgraded to an I.P. intercom system. PA system will be approaching end of life soon and shall be replaced in 3-5 years.

Building Security System:

There is an existing intrusion system for the building with perimeter door contacts. The system appears to be in fair condition.

The door access control utilizes Genetec Synergis Cloud Link which is a wired system. The District should review operational and security needs and provide additional door access controls if deficiencies are noted.

There were no cameras observed inside the building. The District should review operational and security needs and provide cameras where desired.

The main office was utilizing AiPhone IX series master and IX-DA model for the front entrance for communication at the front entrance of the school

Issues to consider:

SAES.EL.01 Consideration should be given to adding an emergency generator system to the building to backup both code required system such as emergency lighting and non-legally required systems such as the heating plant.

SAES.EL.02 All lighting and lighting controls should be replaced/updated to LED lighting with new code compliant controls and dimming to realize maintenance and energy savings.

SAES.EL.03 It is recommended that additional wireless access points and additional data drops should be considered for future upgrades. The CATV system and all abandoned cables should be removed if it is no longer active.

SAES.EL.04 It is recommended that the existing clock and intercom systems be upgraded to newer systems

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including wireless clock correction and non-centralized I.P. intercom system.

SAES.EL.05 The District should review operational and security needs for the building and provide additional door access controls where deficiencies are noted. In addition, networked surveillance cameras should be provided for the building where desired.



Existing Domestic Water Service Meter Vault

PLUMBING

Domestic Water Service and Distribution

The building has been provided with public domestic water service. The meter and backflow preventer are located in an exterior meter vault.

Septic/Sewage

The building drainage system is served by public sewer.

Domestic Water Heating System

The existing domestic water heating system serving the building includes an A.O. Smith 100 gal, 250 MBH gas fired water heater. Expansion tank, master mixing valve, and hot water recirculation was not observed. The tags on the water heater indicated it was installed in 2015. The heater appeared to be in fair condition and is approx. half way to expected 10-15 year service life for this heater.

Fuel Gas System:

The school has been provided with natural gas service supplied by UGI. The service has been provided to serve building heating, domestic water heating, and kitchen equipment. The service/meter has been provided with a partial height chain link enclosure for security.



Existing Domestic Water Heater

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Existing Student Gang Toilet Plumbing Fixtures



Plumbing Fixtures:

Plumbing fixtures within Student Gang Toilet rooms include floor mounted water closets and floor mounted urinals with manual flush valves, and wall hung lavatories with manual faucets. In general, most fixtures are in fair condition but are dated and not water conserving type. These toilet room installations do not comply with all current ADA/ANSI A117.1 accessibility requirements. Lavatories have not been provided with thermostatic tempering valves required by current plumbing code.



Existing Plumbing Fixtures in Classroom Toilet Rooms



Plumbing fixtures within Public Gang Toilet rooms include floor mounted water closets and floor mounted urinals with manual flush valves, and countertop lavatories with manual faucets. In general, most fixtures are in fair condition but are dated and not water conserving type. These toilet room installations do not comply with all current ADA/ANSI A117.1 accessibility requirements. Lavatories have not been provided with thermostatic tempering valves required by current plumbing code.



Existing Plumbing Fixtures in Classroom Toilet Rooms

Plumbing fixtures within the individual Kindergarten classroom toilet rooms include floor mounted “Baby Bowl” water closets and wall hung lavatories installed at Juvenile heights. The fixtures are generally in fair condition but the installations do not comply with all current ADA/ANSI A117.1 accessibility requirements.

Existing classroom sinks are generally in fair condition; however, do comply with ADA/ANSI A117.1 accessibility requirements. Art room sinks include solids interceptors/plaster traps on the drainage piping.

Most existing Electric Water Coolers are in good condition and include bottle filling stations. Installations complying with ADA/ANSI A117.1 accessibility requirements have been provided.



Existing Electric Water Coolers

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Existing Janitor Service Sink

Existing janitor service sinks are wall hung and not easily used for emptying buckets or other Janitorial functions, and the utility faucets are in poor condition. Auxiliary hose connections have not been provided for connections to cleaning solution dispensers.

The triple bowl sink and the dishwasher have been installed with code required indirect drainage to prevent backup of sanitary drainage into the fixtures.

Existing exterior non-freeze wall hydrants lack lockable cover to prevent tampering.

Sanitary Drainage:

The below slab sanitary drainage piping serving the building is believed to be remaining from the original building construction and condition is unknown. The District did not report any chronic drainage issues with the existing sanitary piping.

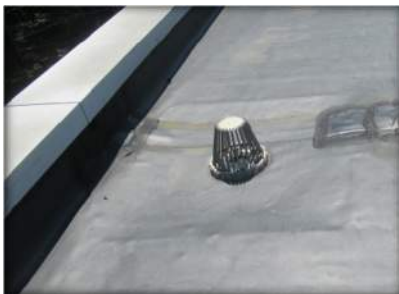


Existing Grease Trap

Kitchen area drainage has been provided with individual steel grease traps recessed within the floor of the adjacent storage room. No condition issues were reported by the school district and the school district confirmed the grease traps are emptied and maintained regularly.

Roof Drainage:

The existing roof is composed primarily of flat EPDM roof construction with gravel stop and/or low parapet edging. The roof drains appeared to be in good condition and free of debris. Emergency overflow scuppers have been provided in lieu of internally piped emergency roof drains.



Existing Roof Drain

Domestic Water Supply System:

Domestic water supply piping is primarily copper piping installed throughout the original building construction and future renovation timeframes. The existing piping system and fixture trim was installed prior to enactment of the 2011 "Reduction of Lead in Drinking Water Act" which has set stricter standards for lead content in materials used within potable water piping systems.

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Fire Protection:

A limited area fire protection/sprinkler system has been provided in the Storage room adjacent to the Mechanical room. The system is served from the domestic water system and the backflow preventer has been installed above the ceiling and is not easily accessible for service or testing. A current test tag was observed.

The exhaust hood within the Kitchen has been provided with an Ansul fire suppression system.

Issues to consider:

SAES.P.01 The existing Domestic water heater boiler appears to be in fair condition but approximately 7 yrs. old and mid way to the end of its expected useful life. Capital planning should account for replacement of the water heater in the next 5-10 yrs. Lack of a duplex water heater installation would cause a complete loss of hot water to the building in the event of a water heater failure.

SAES.P.02 Consideration should be given to providing expansion tank, and mixing valves on installations not already provided. Recirculation systems should be installed at these locations as part of any future renovation project.

SAES.P.03 Overall most plumbing fixtures within the building are in good or fair condition but do not comply with all current ADA/ANSI A117.1 requirements and not water conserving type. Any replacement of the fixtures should address all ADA/Accessibility issues as well as current water and energy conservation requirements.

SAES.P.04 Consideration should be given to renovations permitting new plumbing fixture installation in accordance with ADA/ANSI A117.1 accessible requirements. ASSE certified tempering valves should be provided at all handwashing fixtures

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for scald protection as required by current plumbing codes.

SAES.P.05 The potable water distribution system should be tested for lead. Lead reduction filters should be installed at all drinking fountains and potable water outlets intended for human consumption as required based on test results.

SAES.P.06 Consider providing existing non-freeze wall hydrants with locking covers to prevent tampering and vandalism.

SAES.P.07 Provide emergency/safety plumbing fixtures in any area where caustic, corrosive or injurious chemicals are used or dispensed in accordance with OSHA regulations and ANSI Z358.1. Review MSDS information to determine required emergency fixtures. Possible locations could include mechanical rooms with chemical treatment equipment, Janitor/Custodial closets, Nurse's area, etc.

SAES.P.08 Janitor closets should be renovated to include floor mounted mop receptors and emergency eye wash system to comply with OSHA requirements. Auxiliary hose connections should be provided for connection of cleaning solution equipment to avoid connecting the equipment directly to the utility faucet.

SAES.P.09 An automatic sprinkler system should be provided throughout the building to attain a "fully sprinklered" building as part of any significant future renovation project.

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103 Waverly Rd, Waverly, PA 18471



Waverly Elementary front elevation

HISTORY

Waverly Elementary School was originally built in 1926 as a two-story school house. An addition to house new classrooms, a multi-purpose room, and administration was built in 1996.

BUILDING STATISTICS	
Size of Building	approximately 40,000 SF
Building Footprint	approximately 32,000 SF
Size of Site	approximately 4.2 acres
2021-2022 Enrollment	310 students
Grades	Kindergarten – Fourth Grade
Kindergarten	44 students
First Grade	66 students
Second Grade	66 students
Third Grade	74 students
Fourth Grade	60 students

SITE

Vehicular Circulation and Parking

There are multiple points of entry into the site. The buses and parents have to cross paths during pick up / drop off because of the intersection of drives. There is also a roundabout loop at the east of the site. This is currently not used due to the small size and poor maneuverability.

There is one main parking lot on the site. There are also two disconnected handicap parking spots to the north of the building entrance. The site also houses a small district storage/maintenance building. This building (in the south corner of the site) has a paved area for a few cars to park.



Waverly Elementary site

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Cracking on driveways



Hard play with cracking/large patches



Paving damage at courtyard



Cracks and damage at hard play area

Issues to consider:

WES.S.01 Reconfigure lanes to separate buses and parent cars at pick up and drop off.

Sidewalks and Paving

There is a sidewalk that wraps around most of the building. Sidewalks are in fair condition, with some damage at edges and corner.

The drives and parking lots are in poor condition with significant cracking throughout all paved areas of the site.

Issues to consider:

WES.S.02 Mill and overlay asphalt within ten years.

Play Area

There is one large mulched play area on the south corner of the site. Access is provided to the play area, however there are no handicap accessible pieces of play equipment.

Hard play is located at the north corner of the site. This area has significant cracking. It has a vehicular curb cut leading into the area which presents a safety concern.

In addition to the play areas surrounding the buildings, there is also a paved courtyard that is only accessible from inside the building. This provides an easily accessible secure play area. Currently, the courtyard is not heavily utilized by students or staff. There is pretty significant paving damage and the surface of the courtyard has a slope to it that makes it difficult for activities. The vegetation is overgrown in some areas.

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Exterior brick with some efflorescence at openings

Issues to consider:

WES.S.03 Fully secure hard play area from the cars on the street and site for safety.

WES.S.04 Provide ADA access to play equipment at mulched area. Consider re-mulching or resurfacing remainder of play area.

WES.S.05 Revitalize courtyard area to contain zones of teaching and play, while fixing the grade changes and demolishing or reconstructing the paving.



Some cracked mortar and brick staining at courtyard

BUILDING EXTERIOR

Façade

The façade is primarily comprised of red brick with accents of white cement board. Most of the brick is in good condition, with some staining or efflorescence in select areas. The efflorescence is primarily occurring at the 1994 addition parts of the building.

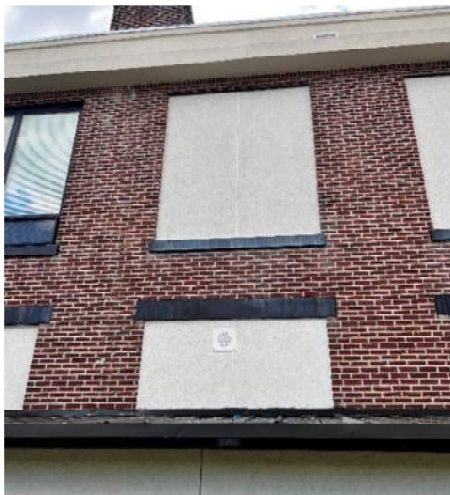
In the original part of the building, there is some staining and damage at heads and sills of windows and infilled windows.

Issues to consider:

WES.BX.01 Repair any areas where openings in brick have allowed for efflorescence to occur. Clean off efflorescence.

WES.BX.02 Repair cracks in mortar.

WES.BX.03 Repair or repaint heads and sills of windows.



Discoloration at heads and sills

Fenestration

Fenestration consists of aluminum windows and aluminum storefront and doors. All fenestration systems appear to be in good condition.

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Ponding on toilet room additions

Roof

The roof of the 1994 addition appears to be in poor condition. The roof is a low slope modified bitumen roof. There is significant wear to the top asphalt membrane. Ponding can be seen in some areas, especially at the ground floor bathroom additions.

Issues to consider:

WES.BX.04 Replace 1994 addition roof within the next 5 years.

BUILDING INTERIOR

ADA Compliance

Access into and through the building is compliant with ADA guidelines. The main entrance is at a lower elevation level than the original two-story portion. The main levels are connected by a ramp. The two-story portion is connected by two stair towers and an elevator.

Most classroom entrances are compliant. There are three classrooms in the south wing that connect the original building to the 1994 addition that do not meet ADA clearance requirements.

Most toilet rooms throughout the building do not provide needed clearances, equipment, and fixture heights for ADA requirements. The toilet rooms that were added to the classrooms in the original building have the required clearances, but the accessories do not meet code.

The gang bathrooms in the original building do not provide proper clearances to or within the restroom. These would need to be reconfigured to meet ADA requirements.

The sinks within the classrooms do not meet the height or clearance requirements for ADA compliance.

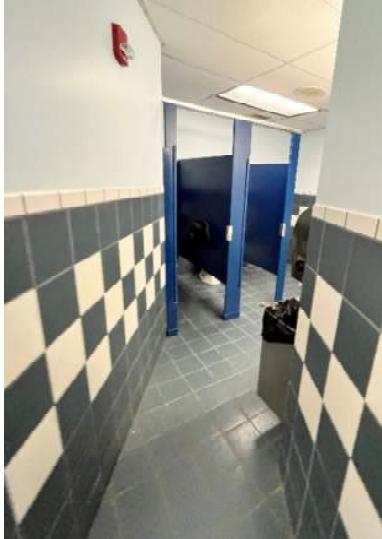


Non-ADA compliant toilet room



Typical sink in classroom

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Narrow entry to gang toilet rooms

- WES.BI.01 Install ADA compliant fixtures (handrails, trash receptacles, etc.) in single-use toilet rooms that have compliant clearances.
- WES.BI.02 Reconfigure classroom entrances (3) to meet ADA clearance requirements.
- WES.BI.03 Reconfigure gang toilet rooms on main level and second level.
- WES.BI.04 Replace all sinks in classrooms to provide ADA compliance.

Administration

The entry vestibule into the school is disconnected from the main office. The vestibule is also not visible from the front desk which presents a security concern. Once a visitor is let into the building, they have access to the entire school.



Main office for administration

The administration offices have carpet, painted walls, and acoustical ceiling tile (ACT). Finishes are in fair condition.

The admin area is connected to the nurse's suite. The nurse's suite does not have an ADA toilet room.

Issues to consider:

- WES.BI.04 Consider connecting vestibule and reconfiguring administration suite to integrate a secure entry protocol into the building. Replace all sinks in classrooms to provide ADA compliance.
- WES.BI.05 Reconstruct toilet room for nurse's suite.



Ramp connection to original wing of building

Classrooms

Classrooms have a variety of flooring finishes. Most in the original section have new carpet that is in good condition. In the 1994 classrooms, there is a combination of carpet alone or carpet and VCT. This carpet is in poor condition. All classrooms have painted walls, casework, and ACT ceiling.

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Typical classroom

Issues to consider:

WES.BI.06 Replace carpet in classrooms.

Corridors

Corridors have carpet, painted walls, and acoustical ceiling tile (ACT) throughout. In the original building, there is interior brick wainscoting on the walls. This is in good condition. All other ceilings and walls are in fair condition. The carpet in the original building has been replaced and is in good condition. The carpet in all other areas of the school is in poor condition.



Typical corridor

Issues to consider:

WES.BI.06 Replace carpet in 1994 corridors and lobbies with a more durable material like VCT.

Multi-purpose Room

The multi-purpose room has wood flooring, painted CMU walls, and an open ceiling. The kitchen for serving is adjacent. The stage pulls out of the recessed area when needed. The finishes are in good condition.



Multi-purpose room

Library

The library is located on the second floor of the building in a former classroom space. There is carpet, painted walls, casework, and ACT ceiling. The space has stacks and just a few tables for students. There is no area to support STEM programming or collaboration.

Issues to consider:

WES.BI.06 Renovate library to achieve a more flexible, STEM driven environment.

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HVAC

Central Heating Plant

Building hot water is generated by two natural gas H.B. Smith Series 28 2499 MBH cast-iron boilers with Webster burners. The boilers and burners were installed in 1996 but appear in fair condition. The breeching associated with the boilers is in good condition and one of the circulator pumps has had a recent motor replacement. The pumps appear to be in poor condition and there are no VFD's associated with the pump motors. The hot water piping, accessories, and insulation appear to be in fair condition.

Central Cooling Plant

The building does not have a central chilled water plant. Select areas (library, classroom 207, administration, gymnasium) are conditioned by packaged rooftop units or DX split-system units.



Existing H.B. Smith cast-iron natural gas boiler with Webster burner

Library

The library is served by two under-window vertical unit ventilators with hot water heating and DX cooling coils. The condensing units associated with the DX coils were manufactured in 1996 and 2016. The 1996 condensing unit should be replaced. The unit that was manufactured in 2016 is in disrepair and should be re-built.

Kitchen

The kitchen is served by a ducted system providing heating and ventilation. The kitchen exhaust hood is connected to an upblast grease fan located on the roof. An Ansul system was observed within portions of the hood to protect certain equipment types as required by code. A dedicated exhaust fan serves the dishwasher condensate hood. The year of manufacture is unknown but they are assumed to have been installed in 1996. The units appear to be in fair condition. The grease hood itself appeared in good condition.



Existing pipe portal and electrical disconnect for the Library Condensing Unit

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Existing administration rooftop unit

Administration and Nurse

The administration area is served by a packaged rooftop unit that was installed in 1996. The unit consists of mixing box, DX cooling coil, gas furnaces, and a supply fan. The unit is in fair condition. Fan coils (installed in 1996) are present and serving exterior zones. The nurse area is served by a packaged rooftop unit that was installed in 1996. The unit consists of mixing box, DX cooling coil, gas furnaces, and a supply fan. The unit is in fair condition. Exhaust systems in the nurse area appeared adequate for the use of the space.

Gymnasium and Cafeteria

The gymnasium and cafeteria are served by six packaged rooftop air handling units. The units contain mixing boxes, filters, DX cooling coils, gas furnaces, and supply fans. The units were believed to have been installed in 1996 and they appear to be in fair condition.



Existing under-window unit ventilator

Classrooms and Support Spaces

The classrooms and corridors were renovated in 1996. Each classroom contains an under-window vertical unit ventilator with a hot water heating coil, supply fan, and filters. The classrooms are not air conditioned. Ventilation air is ducted into the corridors through rooftop gas-fired furnaces that were installed in 1996. The classroom unit ventilators are in fair condition but they have limitations in that they cannot cool or dehumidify their spaces. Transfer air systems are present to rooftop relief ventilators that pre-date the 1996 renovation and perimeter hot water radiation is present in a majority of the classrooms. The Corridor rooftop units are in poor condition.

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Terminal Heating Equipment

Terminal heating equipment such as baseboard radiation, convectors and cabinet heaters heat auxiliary spaces and provide comfort heating to several occupied spaces. Most components were replaced in 1996 but some pre-date this renovation and should be replaced. Electric radiation is present in a few Corridor areas where service from the hot water piping was not feasible. The expected service life for these heaters ranges from 20-25 years.

Exhaust Air Systems

Exhaust fans were observed serving the Toilet Rooms and appeared to be in conformance with the requirements of the International Mechanical Code. The fans are believed to be in working order and appeared to be in fair condition. The Art Room and main Electric Rooms do not have exhaust systems that are required by current codes. The crawlspace in the basement is poorly ventilated. The ASHRAE Median Service Life for exhaust fans is 20 years.

Ductwork and Piping Systems

The supply, return and exhaust ductwork appeared to be galvanized steel sheet metal and in acceptable condition. The ASHRAE Median Service Life for ductwork is 30 years.

Hot water piping and insulation observed in the boiler room appeared to be in fair condition. A majority of the horizontal runs are present in the crawlspace.

Automatic Temperature Control

The building operates off a central JCI Metasys Building Automation System. The system contains a mixture of DDC (electronic) and pneumatic controls. The pneumatic control system mostly drives the terminal heating devices and it is antiquated and should be replaced. The existing air compressor (serving the pneumatic system) is in poor condition.

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Issues to consider:

- WES.HVAC.01 Consider a major HVAC renovation that will provide cooling to occupied spaces. Viable systems would include 4-pipe vertical unit ventilators, or supplementing the existing systems with roof-mounted DX recovery units.
- WES.HVAC.02 Consideration should be given to the installation of a new air-cooled chiller for 4-pipe options. Pending system choice, ductwork could be provided in each Classroom to improve air distribution, reduce noise, and adequately ventilate in accordance with today's standards.
- WES.HVAC.03 Consider replacing the existing boilers with new, high-efficiency gas-fired condensing style boilers. Replace existing pumps and accessories and provide VFD's as part of this upgrade.
- WES. HVAC.04 All exhaust fans and auxiliary heaters that were not replaced in 1996 should be replaced.
- WES. HVAC.05 The Art Classroom and Electric Room should be furnished dedicated exhaust systems to meet latest code requirements.
- WES. HVAC.06 Replace pneumatic portions of the existing ATC system with new DDC components and interface them into the building wide JCI Metasys system.
- WES. HVAC.07 Repair new (2016) Library condensing unit and replace old (1996) Library condensing unit.
- WES. HVAC.08 Consider installation of dedicated ductless split-system cooling units for IDF spaces.

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Typical Siemens 1995 branch distribution panelboard

ELECTRICAL

Electrical Distribution

The electrical service originates from a PP&L pole. The electrical service drops underground, from the PP&L pole to an outdoor transformer located towards the rear of the building. The electrical service equipment inside the building consists of a PP&L metering cabinet, Siemens 1600A 208/120V main breaker section, and a 208/120V distribution section dated 1995. It appears as though all 120/208V panels originate from the 120/208V distribution section in the main electrical room. All distribution equipment was observed to be manufactured by Siemens and dated for 1995. At least one older Siemens of an unknown age was observed in the kitchen.

It is recommended to replace any panelboards older than the panels installed in 1995. Panelboards installed in 1995 are nearing end of life, but appear to be in good condition and should have parts available for service.

Emergency Generator

This building does not have an emergency generator. Emergency lighting is handled through an Emergi-Lite inverter. The inverter in the basement was rated for 4000VA output. The size of the inverter near the gymnasium/kitchen is unknown, but is estimated to be 4000VA output.

It is recommended that the existing Emergi-Lite inverters be removed and a new generator, two automatic transfer switches, one manual transfer switch, and a temporary generator hookup is installed. Two automatic transfer switches are required to separate life safety lighting loads from other non-life safety loads. A manual transfer switch and temporary generator hookup is code required to hookup a portable generator to bypass the permanent generator for maintenance purposes.



Emergi-Lite inverter for emergency lighting

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Lighting

The lighting observed inside the building is mostly fluorescent fixtures. It was noted that flooding from a water fountain caused some light fixtures to be replaced with LED flat panels on the first floor corridors and some classrooms. Some automatic shut-off controls (occupancy) sensors were observed in the building as required by current energy codes. Some rooms were not observed to have lighting control sensors in them. It is recommended to expand the existing system to include automatic controls for the entire building.

Most building exterior lighting appears to be LED fixtures. The fixtures appear to be newer and in good condition. Some exterior lighting was observed to be HID.

Emergency lighting is provided throughout the building through the inverter system. It is undetermined how the emergency lighting is controlled. It is assumed emergency fixtures are unswitched and on 24/7. The majority of lighting fixtures observed are in working condition. Consideration should be given that the existing fluorescent fixtures be replaced with LED fixtures for reduced maintenance and energy savings. Consideration should also be given to expanding the existing lighting control system to automatically shutoff lighting when the areas are unoccupied.

Data Networks & Technology

The data network solution observed is a combination of cat 6 and cat 5e. There are multiple floor mounted racks located throughout the building for network distribution. The rack location noted to be the MDF did have some sort of wall mounted mini split cooling system. There are wireless access points located throughout the building. There is an old coaxial cable televisions (CATV) system observed for the building which was said to not be in use. It is recommended that additional wireless access points and additional data drops should be considered for future upgrades. The CATV system and all abandoned cables should be removed if it is no longer in use.

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Simplex 4020 fire alarm control panel

Fire Alarm System

The existing fire alarm system is a Simplex 4020 system that is horn/strobe activated. Smoke detection and notification devices are provided throughout the building. The system is in good condition, however current code requires voice notification and the existing system utilizes horns/tome notification. Additionally, this system is no longer supported by Simplex and will require replacement as the system becomes harder to service. Significant renovations or modifications to this system will require the systems be upgraded to the current code.

Intercom/Public Access/Clock System

Original wall mounted clock/speaker units were observed throughout the building. The clocks are National Time and headend clock control is Dukane. The existing intercom system utilizes a Dukane head end and appears to be in adequate condition. The existing phone system is a Mitel Voice Over IP (VOIP) and appears to be in adequate condition. It is recommended that the existing public address system be upgraded to an I.P. intercom system. PA system will be approaching end of life soon and shall be replaced in 3-5 years. It is recommended that the master clock system be replaced as it is nearing end of life.



Existing Dukane floor mounted PA rack

Building Security System

There is an existing Radionics intrusion system for the building with perimeter door contacts and interior motion detection. The system appears to be in fair condition. The District should review operational and security needs and provide additional motion detection if deficiencies are noted.

The door access control system manufacturer was not observed. There appears to be HID card readers at select exterior doors. The District should review operational and security needs and provide additional door access controls if deficiencies are noted. There are no security cameras. The District should review operational and security needs and provide cameras where desired.

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The main office was utilizing AiPhone IX-MV desk model and IX-DA model for the front entrance for communication at the front entrance of the school.

Issues to consider:

- WES.EL.01 Consideration should be given to upgrading classroom lighting with new LED fixtures, and expanding code required automatic lighting controls for reduced maintenance and energy savings.
- WES.EL.02 It is recommended that an emergency generator, (2) automatic transfer switches, (1) manual transfer switch and a temporary generator hookup be installed for emergency power backup.
- WES.EL.03 It is recommended that additional wireless access points and additional data drops should be considered for future upgrades.
- WES.EL.04 The CATV system and all abandoned cables should be removed if it is no longer active.
- WES.EL.05 It is recommended that the existing clock and intercom systems be upgraded to newer systems including wireless clock correction and non-centralized I.P. intercom system.
- WES.EL.06 The District should review operational and security needs for the building and provide additional door access controls where deficiencies are noted.
- WES.EL.07 Networked surveillance cameras should be provided for the building where desired.

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Existing Domestic Water Service

PLUMBING

Domestic Water Service

The building has been provided with a public domestic water service. The main 4" combination Fire Protection/Domestic water service for the building is located in the basement level. The domestic service includes ball valve shutoffs, 2" water meter, and reduced pressure zone backflow preventer. A current test tag was not observed on backflow preventer.

Septic/Sewage

The building drainage system is served by public sewer system.

Domestic Water Heating

The existing domestic water heating system serving the kitchen is located in a storage room adjacent to the Kitchen and includes a Rheem 86 gal, 250 MBH gas fired storage type water heater, and hot water recirculation. The installation date of the water heater could not be determined but the water heater appeared to be in fair/good condition.



Existing kitchen (left) and main building domestic water heaters

The existing domestic water heating system serving the main building is located in the basement Mechanical room and includes a Rheem 86 gal, 250 MBH gas fired storage type water heater, and hot water recirculation. The installation date of the water heater could not be determined but the water heater appeared to be in fair/good condition.

Fuel Gas System

The school has been provided with natural gas service supplied by UGI. A single service has been provided to serve building heating, domestic water heating, and kitchen equipment. The existing meter is an older style, large diaphragm meter and has not been provided with any security enclosure.



Existing Natural Gas Service/Meter

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Plumbing Fixtures



Plumbing fixtures within student gang toilet rooms include floor mounted water closets and wall hung urinals with manual operated flush valves, and wall hung lavatories with manual faucets. In general, most fixtures are in fair condition but are dated and not water conserving type. These toilet room installations do not comply with all current ADA/ANSI A117.1 accessibility requirements. Lavatories have not been provided with thermostatic tempering valves required by current plumbing code.



Existing Student Gang Toilet Plumbing Fixtures

Plumbing fixtures within public gang toilet rooms include floor mounted water closets and wall hung urinals with manual flush valves, and countertop lavatories with manual faucets. In general, most fixtures are in fair condition but are dated and not water conserving type. These toilet room installations do not comply with all current ADA/ANSI A117.1 accessibility requirements. Lavatories have not been provided with thermostatic tempering valves required by current plumbing code.



Existing Plumbing Fixtures in Classroom Toilet Rooms

Plumbing fixtures within the individual kindergarten classroom toilet rooms include floor mounted water closets and wall hung lavatories installed at juvenile heights. The fixtures are generally in fair condition but the installations do not comply with all current ADA/ANSI A117.1 accessibility requirements.

Existing classroom sinks are generally in fair condition; however, do comply with ADA/ANSI A117.1 accessibility requirements. Art room sinks include solids interceptors/plaster traps on the drainage piping.



Existing Electric Water Coolers

Most existing Electric Water Coolers are in good condition and include bottle filling stations; however, the installations do not comply with ADA/ANSI A117.1 accessibility requirements.

Existing janitor service sinks are wall hung and not easily used for emptying buckets or other Janitorial functions, and the utility faucets are in poor condition. Auxiliary hose connections have not been provided for connections to cleaning solution dispensers.

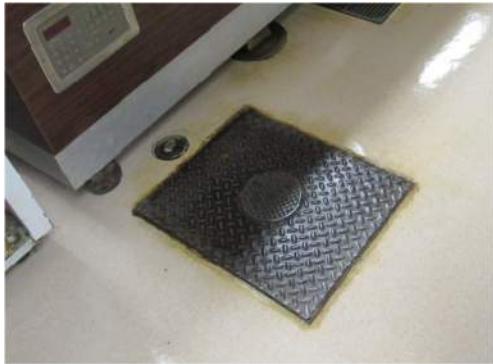
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The triple bowl sink and the dishwasher have been installed with code required indirect drainage to prevent backup of sanitary drainage into the fixtures.

Existing exterior non-freeze wall hydrants lack lockable cover to prevent tampering.

Sanitary Drainage

Portions of the below slab sanitary drainage piping serving the building is believed to be remaining from the original building construction and condition is unknown. PVC drain piping installed during building renovations was observed within the basement level and appears to be in good condition.



Existing Grease Traps

Kitchen area drainage has been provided with individual steel grease traps recessed within the kitchen floor. No condition issues were reported by the school district and the school district confirmed the grease traps are emptied and maintained regularly.

Roof Drainage

The existing roof is composed primarily of flat EPDM roof construction with gravel stop edging. The roof drains appeared to be in good condition and clear of debris; however, one drain appeared to be blocked and some ponding was observed near roof edges. Emergency overflow scuppers have been provided in lieu of internally piped emergency roof drains.



Existing Roof Drain

Domestic Water Supply System

Domestic water supply piping is primarily copper piping installed throughout the original building construction and future renovation timeframes. The existing piping system and fixture trim was installed prior to enactment of the 2011 “Reduction of Lead in Drinking Water Act” which has set stricter standards for lead content in materials used within potable water piping systems.

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Fire Protection

A full building automatic fire protection/sprinkler system has not been provided. A limited area system has been provided for the basement level storage and mechanical areas. The Fire protection service includes a 2 " water meter and 2-1/2" reduced pressure zone backflow preventer, and fire department connection.

The exhaust hood within the Kitchen has been provided with an Ansul fire suppression system.

Issues to consider:

- WES.P.01 The installation date of the existing domestic water heaters is not known; however, they appear to be in fair condition. Capital planning should account for replacement of the water heaters in the next 5-10 yrs.
- WES.P.02 Overall most plumbing fixtures within the building are in good or fair condition but do not comply with all current ADA/ANSI A117.1 requirements. Any replacement of the fixtures should address all ADA/Accessibility issues as well as current water and energy conservation requirements. Consideration should be given to renovations permitting new plumbing fixture installation in accordance with ADA/ANSI A117.1 accessible requirements.
- WES.P.03 Consider installing electronic hands-free metering faucets with Lav Shield covers below existing lavatory installations to prevent tampering with exposed faucet supplies and electronics.
- WES.P.04 ASSE certified tempering valves should be provided at all handwashing fixtures for scald protection as required by current plumbing codes.

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- WES.P.05 Consider installing hands-free sensor operated flush valves on public use toilets.
- WES.P.06 Existing electric water cooler installations should be upgrade to bi-level ADA/ANSI compliant installations and be provided with lead reduction filters and bottle filling stations.
- WES.P.07 The potable water distribution system should be tested for lead. Lead reduction filters should be installed at all drinking fountains and potable water outlets intended for human consumption as required based on test results. Domestic water supply piping within the original construction area should be inspected for internal condition and replaced as required.
- WES.P.08 All domestic hot water piping should be insulated to comply with current energy codes.
- WES.P.09 Domestic cold water piping should be insulated to prevent condensation and potential mold growth in concealed locations.
- WES.P.07 Drainage piping, especially original to the original building construction should be inspected for collapsed or broken section of pipes. Any existing piping with connections to new renovations should be flushed and inspected to verify condition.
- WES.P.08 Based on reports of poor condition, complete replacement of the sanitary drainage piping below slab should be considered.
- WES.P.09 Consider providing existing non-freeze wall hydrants with locking covers to prevent tampering and vandalism.
- WES.P.10 Provide emergency/safety plumbing fixtures in any area where caustic, corrosive or injurious chemicals are used or dispensed in accordance with OSHA regulations and ANSI Z358.1. Review MSDS information to determine required emergency fixtures. Possible locations could

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include mechanical rooms with chemical treatment equipment, Janitor/Custodial closets, Nurse's area, etc.

WES.P.11 Janitor closets should be renovated to include floor mounted mop receptors, and an emergency eye wash system to comply with OSHA requirements. Auxiliary hose connections should be provided for connection of cleaning solution equipment to avoid connecting the equipment directly to the utility faucet.

WES.P.12 An automatic sprinkler system should be provided throughout the building to attain a "fully sprinklered" building as part of any significant future renovation project.

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Abington Heights Middle School



AHMS front entry vestibule



AHMS site

HISTORY

Abington Heights Middle School was constructed in 1975. Some interior spaces have been reconfigured, but there has not been any additions or major interior renovations since its original construction.

BUILDING STATISTICS

Size of Building	approximately 140,200 SF
Building Footprint	approximately 110,000 SF
Size of Site	approximately 82.7 acres (shared)
2021-2022 Enrollment	1105 students
Grades	Fifth Grade – Eighth Grade
Fifth Grade	258 students
Sixth Grade	293 students
Seventh Grade	278 students
Eighth Grade	276 students

SITE

Vehicular Circulation and Parking

There is one drive into the middle school site. A secondary drive connects the middle school campus with Newton-Ransom Elementary. Parents and buses use the single driveway to enter and exit the site. The cars for parent drop off end up overlapping onto Newton Ransom Blvd.

There are two parking lots on the site. The visitor parking lot is west of the main entrance and used for visitor parking as well as bus drop off. The parking lot to the northeast of the site is used for staff parking. The site also houses a small district storage/maintenance building. This building (in the south corner of the site) has a paved area for a few cars to park.

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Issues to consider:

AHMS.S.01 Reconfigure lanes to separate buses and parent cars at pick up and drop off.



Deteriorating asphalt paving at parking and drives



Failing curbs at drives



Damaged sidewalk/curb with exposed rebar; asphalt cracking at drive

Sidewalks and Paving

There is a sidewalk that wraps around the west, north, and east sides of the building. The sidewalks are mostly in fair condition with some exceptions. There is breaking/cracking at edges and the sidewalks at the pod exits have substantial cracks with vegetation growth and cracks/seams. These sidewalks are not at the same level as the exit doors and therefore have non-ADA compliant painted plywood ramps at each door.

The drives and parking lots are in poor condition with significant cracking throughout all paved areas of the site. Curbs at the drives are failing.

Issues to consider:

AHMS.S.02 Replace all sidewalks/ramps at pod exit areas.

AHMS.S.03 Mill and overlay asphalt within five years.

AHMS.S.04 Replace curbs.

Courtyard/Site Components

There is one large mulched and paved area located to the northeast of the building. This area contains swings only and is located between the middle school building and the elementary school. There is no direct access from either school building to the play area except walking on the driveways.

Tennis courts are to the east of the building. The four courts are fenced in with a small bleacher area. The courts are in good condition.

Within the building, there is access to a courtyard. The courtyard is a combination of concrete paving, grass, and

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AHMS interior courtyard

mulched beds. There are multiple points of access into the courtyard, but it is underused and overgrown. There is vegetation growing underneath the doors and is now inside the building.

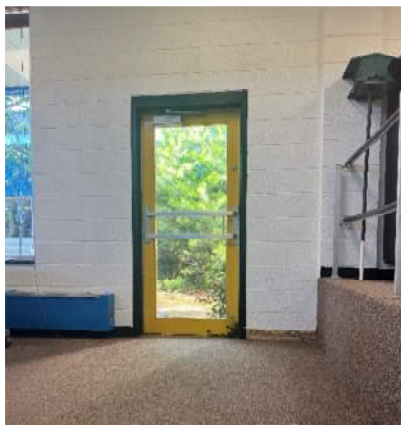
There is a water retention basin on the north side of the site, near the driveway entrance.

Issues to consider:

AHMS.S.05 Provide safe access to tennis courts and swing area.

AHMS.S.06 Clean up courtyard overgrowth.

AHMS.S.07 Provide fencing/fall protection around water retention basin area for safety of students.



Courtyard vegetation at the library door

BUILDING EXTERIOR

Façade

The façade is primarily comprised of white brick with accents of blue metal panels. The brick, especially on the exterior of the pod locations, is in poor condition with areas of cracking, spalling, and missing brick. The soft joint between the sidewalk and brick has disintegrated at almost all locations.

Issues to consider:

AHMS.BX.01 Repair areas of missing brick.

AHMS.BX.02 Replace damaged/spalling brick.

Repair/rebuild areas of water infiltration causing spalling to have proper weep holes.



Missing brick, exposing board insulation beyond

Fenestration

Fenestration consists of aluminum windows and aluminum storefront and doors. Fenestrations appear to be in good condition, however most are operable and have full-range swing. There is no stop or fall protection for safety.

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Issues to consider:

AHMS.BX.03 Add stops to all operable windows so the opening will not allow a 4" sphere to pass through when fully extended in open position.



Full-swing operable window

Roof

The roof is a low slope black EPDM roof. The roof has been replaced since 1975, but there is still some wear starting to occur.

BUILDING INTERIOR

ADA Compliance

Access at the main level of the school (main entrance level) is ADA compliant and has no level changes. At the academic area of the building, there are split levels to access the lower and upper floors. The library houses ramps to access the lower level. Stairs on either side of the pod are also provided for access, but do not have lifts. Once at the pod levels, there is one chair lift at one of four stairs that connect all the pod classrooms. The limited access to academic spaces cannot be fixed without a major construction project.



Single-ply roof membrane

Door hardware throughout is not compliant with current guidelines and therefore should be replaced.

Most toilet rooms throughout the building do not provide the needed clearances, equipment, and fixture heights to meet ADA requirements. Some of these restrooms do not have door entry clearance. Most restroom spaces would need to be completely demolished and reconfigured (possibly enlarged) to create accessible restrooms.

The sinks in casework throughout the building do not meet the height or clearance requirements for ADA compliance.

Issues to consider:

AHMS.BI.01 Replace all door hardware.



Non-compliant restroom

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AHMS.BI.02 Reconstruct all restrooms (single and gang) to be ADA compliant. Expand in areas where needed.

AHMS.BI.03 Replace sinks so at least one in every room where a fixture is located meets ADA compliance.



Non-compliant classroom sink in casework



Typical science classroom in pods



Partition between classrooms

Main Office

The entry vestibule is connected to the main office.

The administration area is adjacent to the nurse's suite. The nurse's suite does not have an ADA compliant toilet room and still contains a dental chair from the 1970s when the school was constructed.

Issues to consider:

AHMS.BI.04 Renovate nurse's suite to provide adequate toilet room and exam room.

Classrooms

The academic classrooms are mainly housed in the semi-circular pod wing. At one time, each area was an open pod layout with one enclosed science room. Since 1975, partitions have been added to separate the pod spaces. These partitions have no acoustical value or fire protection. Some classrooms are accessed by going through other classrooms. The egress stair towers at the ends of each pod are only accessible by one classroom. Each pod also has a small faculty room, which doubles as storage, since there are no storage rooms or supply closets in the pod. Most classrooms have carpet or VCT with ACT ceilings.

Issues to consider:

AHMS.BI.05 The addition of proper walls/corridors to create a true classroom layout in current pods would create very small classrooms with most having no access to natural light. No work is recommended

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because this problem cannot be fixed with a renovation.



Open cafeteria

Corridors

Corridors throughout the building are terrazzo with ACT ceilings. Most of the terrazzo is in fair condition but there is some cracking/breakage in certain areas.

Cafeteria

The cafeteria is an open space that is adjacent to the administration suite. The floor is terrazzo and the ceiling is ACT. Finishes are in good condition. The open concept cafeteria presents noise issues, but it's far enough away from the academic wing that there is typically little disruption.

Auditorium

The auditorium is divided into small sections with the use of folding partitions. Some of the partitions do not function properly and have issues opening and closing.



Auditorium (center room)

Library

The library is also an open concept and sits in the center of the facility between the main building and the academic wing. Ramps and stairs connect the library from the main level to a lower level. Support rooms (offices, etc.) are located between the library and the corridor.



Library

Issues to consider:

AHMS.BI.06 Renovate library for a more flexible, STEM driven environment. Office space needs to be added or relocated, since the current staff has outgrown the space.

AHMS.BI.07 Enclose library for improved acoustics.

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Gymnasium

Gymnasium/Multi-Purpose Room

AHMS has a gym with a wood floor and open ceiling. This is used for athletics though there are no bleachers. The multi-purpose room is located adjacent. This has VCT flooring and ACT ceiling. Both rooms are in good condition.

Locker rooms are adjacent to the gym, but are not ADA accessible as there are stairs to access both. Locker rooms are in poor condition.



Natural gas piping across roof to packaged rooftop air handling unit

HVAC

The majority of the HVAC systems have been replaced over time. These replacements were believed to have taken place in the early 2000's based on the condition of the equipment observed.

Central Heating Plant

The school does not have a central heating plant. A majority of the rooftop HVAC equipment is gas-fired and the interior heating devices contain electric resistance coils. A portion of the auxiliary heating devices appeared to be original to the building and are believed to be controlled by the existing pneumatic ATC system.



Existing rooftop units and condensing units serving split-DX cooling coils.

Central Cooling Plant

The school does not have a central cooling plant. A majority of the rooftop HVAC equipment is packaged with integral compressors and refrigerant processes. Several split-system units with roof-mounted condensing units were observed.

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Auditorium/Stage

The auditorium and stage are served by a packaged rooftop unit through a ducted system above the ACT in the Auditorium. High return grilles are present which are not ideal for air distribution in a volume space. A space temperature sensor (thermostat) was observed but a CO2 sensor was not observed within the space. The rooftop unit is nearing the end of its expected service life and should be considered for replacement.

Library

The open-concept library is served by a packaged rooftop unit through a ducted system. Air is introduced into the space by a combination of sidewall and ceiling-mounted supply air diffusers. A space temperature sensor (thermostat) was observed but a CO2 sensor was not observed within the space. The rooftop unit is nearing the end of its expected service life and should be considered for replacement.



Kitchen grease hood with limited ANSUL system coverage

Cafeteria and Kitchen

The cafeteria is an open concept, served by a packaged rooftop unit through a ducted system above the ACT. Sidewall diffusers were utilized to allow (presumably) for a high ceiling in the center of the space. Electric heaters are present on the exterior wall to treat the windows. A space temperature sensor (thermostat) was observed but a CO2 sensor was not observed within the space. The rooftop unit is nearing the end of its expected service life and should be considered for replacement.

The kitchen is minimally conditioned by an overhead ducted system. Additional make-up air (as required by the grease fans) is provided through adjacent spaces. Auxiliary electric heating terminals are present where anticipated.

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Kitchen exhaust hood is connected to an upblast grease fan located on the roof. An Ansul system was observed within portions of the hood to protect certain equipment types as required by code. A dedicated exhaust fan serves the dishwasher condensate hood. The fans' vintage is unknown but they appear to be in fair condition.

Administration and Nurse

The Administration areas are served by a packaged rooftop unit. The unit consists of mixing box, DX cooling coil, supply fan, and gas heat exchanger. The presence of hot gas reheat (means of dehumidification) was not able to be verified. It is unclear if the unit contains electric constant volume reheat coils, electric VAV terminals, or shut-off VAV terminals without reheat coils to provide individual zone control.

Code-required exhaust is present in the Nurse's area but the volume appears minimal. An exhaust fan in the adjacent toilet room was observed to be in failing condition and should be replaced.



Exposed ductwork systems in the main Gymnasium

Gymnasiums

The main gym is served by two packaged rooftop units through a ducted, exposed system. High return grilles are present which are not ideal for air distribution in a volume space and they are also ducted to the unit with minimal resistance or ductwork which can contribute to a noisy environment. A space temperature sensor (thermostat) was observed but a CO2 sensor was not observed within the space. The rooftop units are nearing the end of their expected service life and should be considered for replacement.

The multi-purpose room is served by a packaged rooftop unit through a ducted system above the ACT. High return grilles are present which are not ideal for air distribution in a

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volume space. A space temperature sensor (thermostat) was observed but a CO2 sensor was not observed within the space. The rooftop unit is nearing the end of its expected service life and should be considered for replacement.

Locker Rooms

The girl's and boy's locker room areas are served by an overhead, ducted system providing conditioned air and what appeared to be adequate airflow for exhaust. The age of the system is unknown but it appeared to be functional despite the limited use of the space. Auxiliary electrical heat was present where anticipated.

Fitness Room

The fitness room is conditioned by a gas-fired furnace that is suspended from the structure above. The system appears to be new and in good condition. It did not appear that the unit contained provisions for cooling, it is believed to function entirely as a heating and ventilating system.



STEM Room with exposed ductwork
(Typical for Tech-Ed Wing)

Art and Tech Ed Rooms

The art, STEM, and Tech Ed rooms are served by packaged rooftop units and exposed supply duct systems. The units were manufactured by JCI in 2009 and appear to be in good condition. A limited number of thermostats were observed in these spaces, indicating that single units serve multiple spaces with a single controller, in lieu of providing individual temperature control. A collection hood was observed in the Wood Shop area that was in good condition, in addition to a paint spray booth that was in fair condition and a capture exhaust hood in the Art room that did not appear to be in use. The fans associated with these systems appeared to be in good condition and are believed to have been installed in 2009. The exterior dust collector was in visibly poor condition (due to rust) and should be refurbished or considered for replacement.

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Pod classroom with single supply air diffuser.

Classrooms and Support Spaces

The classrooms and support spaces are served by packaged rooftop units. A majority of the classrooms are served by one supply air diffuser and the noise levels in several instances were noted to be above what would be considered an environment conducive for teaching and learning. The HVAC system in the Music Room was noted to be especially loud. Door and corridor transfer systems were observed which are no longer code compliant. Minimal zoning was observed, and like the Tech Ed areas it is believed that single units serve multiple spaces with a single controller in lieu of a system that provides individual zone control. It is unclear if the system contains electric constant volume reheat coils, electric VAV terminals, or shut-off VAV terminals without reheat coils to provide individual zone control. The rooftop units were manufactured by EngA and the District has had good success with them. That said they are nearing the end of their expected service lives and should be considered for replacement.

Terminal Heating Equipment

Terminal heating equipment such as baseboard radiation, convectors and cabinet heaters are present to heat auxiliary spaces and to provide comfort heating to several occupied spaces. Most components appear to be original electric devices and they are in poor condition. The expected service life for these heaters ranges from 20-25 years.

Exhaust Air System

Exhaust fans were observed serving the Janitor's Closet and Toilet Rooms appeared to be in conformance with the requirements of the International Mechanical Code. Except those noted above, the fans are believed to be in working order. The ASHRAE Median Service Life for exhaust fans is 20 years.

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Ductwork and Piping Systems

Outside of the semi-circle, the supply, return and exhaust air ductwork appeared to be galvanized steel sheet metal and in acceptable condition. The ASHRAE Median Service Life for ductwork is 30 years.

Within the pod/semi-circle area it was noted that the ductwork system was comprised mostly of duct-board and the systems have failed throughout the years. Duct-board installations are not appropriate for a K-12 facility and it should be replaced.

Piping systems within the facility are minimal and those observed (refrigerant only) appeared to be in fair condition.

Automatic Temperature Controls

Majority of the building is controlled by a Johnson Controls, Inc. Metasys Direct Digital Controls (DDC) system. The system provides a software based central Building Automation System (BAS) that provides graphical representation and points from the HVAC systems throughout the building. Several original devices (mostly electric auxiliary heating devices) were not replaced and still run off the building's pneumatic air compressor. The original building system is antiquated, unreliable and difficult to maintain and should be considered for replacement.

Issues to consider:

AHMS.HVAC.01 As part of a major renovation, consider a whole building conversion to a 4-pipe system able to heat and cool simultaneously through the use of variable speed air-cooled chillers and high efficiency gas-fired condensing boilers.

AHMS.HVAC.02 Consider providing CO₂ sensors in densely occupied spaces (Auditorium, Gymnasium,

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Cafeteria etc.) as a means to reduce outside air and building utility costs when the spaces are not fully populated.

AHMS.HVAC.03 Replace all packaged rooftop units installed prior to 2000. Prepare for replacement of units in 5 years for all those installed prior to 2009.

AHMS.HVAC.04 Consider converting Tech Ed systems to VAV to provide individual zone control. If individual zone control is not present in the Classroom/Pod Area consider the same conversion.

AHMS.HVAC.05 Replace or refurbish the dust collector.

AHMS.HVAC.06 Replace all fiberglass and duct-board systems with SMACNA approved galvanized steel sheet metal ductwork.

AHMS.HVAC.07 All exhaust fans and auxiliary electric heaters that are original to the building should be replaced.

AHMS.HVAC.08 The existing pneumatic ATC system should be removed in its entirety and replaced with a new direct digital control system that can be interfaced into the building's JCI Metasys system. Existing, associated devices should be replaced simultaneously.

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ELECTRICAL

The electrical distribution and generator appear to be original to the building. Fire alarm and PA systems have been replaced at some point, but are nearing end of life.



Typical branch distribution panelboard

Electrical Distribution

The electrical service originates from a PP&L pole. The electrical service drops underground, from the PP&L pole to an exterior PP&L owned transformer near the main electrical room. The electrical service equipment inside the building consists of a PP&L metering cabinet, 4000A GE switchboard with 480/277V main breaker section and 480/277V distribution breaker bucket sections. The 480/277V distribution system is utilized for various mechanical and lighting loads throughout the building. There are multiple transformers throughout the building to supply 120/208V distribution panelboards. All distribution equipment was observed to be manufactured by GE and is original to the building. It is recommended that all of the distribution is replaced with modern, serviceable panelboards.

Emergency Generator

There is a 30kW 277/.480V interior natural gas generator manufactured by Onan located inside the main electrical room. The generator is original to the building and services a single ASCO transfer switch, also original to the building. There does not appear to be separation between life-safety and non-legally required loads, however, the majority of the load is normal emergency lighting. To be code compliant the life safety and equipment (non-legally required) branches cannot share the same panel and needs to be physically separated. This generator is at the end of its life. It appears that the generator does not backup any network, paging, or intercom systems.



Engine Generator

Currently the generator and transfer switches and other associated emergency electrical equipment are all located in the same room as the normal power electrical equipment. This is not permitted by code. National Fire Protection Association (NFPA) 110 code states that the EPSS (transfer

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switch(s) & emergency distribution panels) shall not be installed in the same room with the normal service equipment that is equal to or greater than 1,000A. Additionally, the generator is required to be in a separate fire-rated room. No equipment except those that serve this space shall be permitted in this room, which includes plumbing/HVAC piping and ducts. Since the service is currently 4000A at 480/277V, this should be addressed in any future renovation. Current codes call for selective coordination on the life safety portion of the emergency generator. Nothing appears to be selectively coordinated.

Lighting System

The lighting observed inside the building is a mixture of fluorescent and newer LED flat panel lighting. The building has a mixture of lensed 2x4, parabolic 2x4, pendant type, and industrial linear fixtures. The majority of the building utilizes fluorescent type fixtures. Some select LED fixtures were observed in the Auditorium, Wrestling Gym, Kitchen, and select areas of the building. Some automatic shut-off controls (occupancy) sensors were observed in the building as required by current energy codes. Some rooms were not observed to have lighting control sensors in them. It is recommended to expand the existing system to include automatic controls for the entire building as well as daylight sensors where required. Building exterior lighting appears to be LED fixtures. Some fixtures appear to be newer and in good condition. Other fixtures appear to be worn and should be replaced.

Emergency lighting is supplied from the emergency generator.

The majority of lighting fixtures observed are in working condition. Consideration should be given that the entire building be replaced with LED fixtures for reduced maintenance and energy savings. Consideration should also be given to expanding or replacing the existing lighting control system to automatically shutoff lighting when the areas are unoccupied as required by current codes.

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Typical wall mounted data rack

Data/Network System

The data network solution observed is a combination of cat 5e and cat 6. There are multiple floor and wall mounted racks located throughout the building for network distribution. The rack locations observed appeared to not have any local cooling. There are wireless access points located throughout the building. There is an old coaxial cable televisions (CATV) system observed for the building which was undetermined if it was in use. It is recommended that additional wireless access points and additional data drops should be considered for future upgrades. The CATV system and all abandoned cables should be removed if it is no longer in use.



Gamewell fire alarm control panel

Fire Alarm System

The existing fire alarm system is a Gamewell system. Smoke detection and notification devices are provided throughout the building. The system is in fair condition, however current code requires voice notification and the existing system utilizes horns/tome notification. Significant renovations or modifications to this system will require the systems be upgraded to the current code.

Intercom/Public Address/Clock System

The original Simplex PA/Clock system with wall mounted speakers and clock assemblies are located throughout the building. Some clocks have been replaced with American Time clocks. The existing intercom system appears to be in adequate condition but dated and at the end of its serviceable life. The existing phone system is a Mitel Voice Over IP (VOIP) and appears to be in adequate condition.



Existing clock/speaker assembly

It is recommended that the existing public address system be upgraded to an I.P. intercom system. PA system will be approaching end of life soon and should be replaced in 3-5 years.

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Building Security System

There is an existing intrusion system for the building with perimeter door contacts. The system appears to be in fair condition.

The door access control utilizes Genetec Synergis Cloud Link which is a wired system. The District should review operational and security needs and provide additional door access controls if deficiencies are noted.

There were no cameras observed inside the building. The District should review operational and security needs and provide cameras where desired.

The main office was utilizing iPhone IX series master and IX-DA model for the front entrance for communication at the front entrance of the school.

Issues to consider:

AHMS.EL.01 The entirety of the electrical distribution system should be replaced with new modern equipment for serviceability and to meet new code requirements for GFCI, AFCI, and labeling.

AHMS.EL.02 The emergency distribution system should be replaced with a new code compliant installation with separation of life-safety and non-legally required items.

AHMS.EL.03 Consideration should be given to adding more mechanical (heating) loads to the generator system to prevent the building from freezing during power outages.

AHMS.EL.04 All lighting and lighting controls should be replaced/updated to LED lighting with new code compliant controls and dimming.

AHMS.EL.05 It is recommended that additional wireless access points and additional data drops should be considered for future upgrades.

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AHMS.EL.06 The CATV system and all abandoned cables should be removed if it is no longer active.

AHMS.EL.07 It is recommended that the existing clock and intercom systems be upgraded to newer systems including wireless clock correction and non-centralized I.P. intercom system.

AHMS.EL.08 The District should review operational and security needs for the building and provide additional door access controls where deficiencies are noted. In addition, networked surveillance cameras should be provided for the building where desired.



Existing Domestic Water Service

PLUMBING

Domestic Water Service and Distribution

The building has been provided with public domestic water service. The main 4" Domestic water service for the building is located in a Water service and heater Room adjacent to the Kitchen area of the building and includes gate valve shutoffs, two 2" water meters, sediment filters, and pressure regulator. No backflow preventer was observed on the service piping within the building and is assumed to be located within an exterior vault.

Septic/Sewage

The building drainage system is served by public sewer system

Domestic Water Heating

The kitchen area hot water is served from a 350 MBH gas fired hot water generator and 500 gal. storage tank located in the Water Service/Water Heater room adjacent to the Kitchen. The tags on the water storage tank indicates it was installed in 2009 and it is assumed the hot water generator is original to the 2009 installation. The hot water generator appeared to be in fair condition but is approaching the expected 15 year expected service life. The existing



Existing Domestic Water Heater

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Existing Domestic Water Heater Expansion Tank and Observed Leak

expansion tank had visible leakage and corrosion at the access way for the diaphragm. The system includes a recirculation pump/system but no master mixing valve was observed at the heater system.

Additional local point of use storage type electric water heaters provide hot water for the individual area and classroom pods. The electric water heaters range in age from 2 yrs. To 10 yrs. And are generally in fair condition. Most installations observed do not include expansion tanks, hot water recirculation, or master mixing valves.

Fuel Gas System

The school has been provided with 2psi delivery pressure natural gas service supplied by UGI. The meter and regulator are located in a fenced security enclosure adjacent to the building. The natural gas service supplies gas to the building heating equipment, domestic water heater, and kitchen equipment and is adequate for the existing building load. An LPG(Propane) tank provides fuel gas for the existing emergency generator. The district reported that future connection of the generator to the building natural gas supply is desired and a capped future connection on the rooftop gas distribution main was observed.



Existing Gang Toilet Plumbing Fixtures

Plumbing Fixtures

Plumbing fixtures generally include wall hung water closets and urinals with manual flush valves, and wall hung multi-lavatory stations with mechanical metered faucets. In general, most fixtures are in fair or good condition. Lavatories have not been provided with thermostatic tempering valves required by current plumbing code. These toilet room installations comply with most but not all current ADA/ANSI A117.1 accessibility requirements.



Existing Locker Room Plumbing Fixtures

Plumbing fixtures within the locker room gang toilet rooms are similar to fixtures within gang toilet rooms and include wall hung water closets and urinals with manual flush valves,

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Existing Non-ADA Sinks

and wall hung lavatories with mechanical metered faucets, and gang showers with tempered water supply. In general, most fixtures are in good condition. Lavatories have not been provided with thermostatic tempering valves required by current plumbing code. These toilet room installations do not comply with all ADA/ANSI A117.1 accessibility requirements.

Existing classroom sinks are generally in fair condition; however, not all comply with ADA/ANSI A117.1 accessibility requirements. Art room sinks include solids interceptors/plaster traps on the drainage piping.



Existing Electric Water Coolers

Most existing Electric Water Coolers are in good or fair condition and fitted with bottle fillers; however, they do not comply with ADA/ANSI A117.1 accessibility requirements.

Existing janitor service sinks are floor mounted, in fair condition, and adequate for Janitorial functions. Auxiliary hose connections have not been provided for connections to cleaning solution dispensers. No emergency eyewash or other OSHA required personal safety equipment was observed within the janitor room.



Existing Janitor Service Sinks

Several kitchen food prep sinks and the dishwashing sinks have been installed without code required indirect drainage to prevent backup of sanitary drainage into food prep bowls. Drainage piping in several sinks is also installed without the code required venting which could lead to siphoning of the traps.

Existing exterior non-freeze wall hydrants lack lockable cover to prevent tampering.



Existing Food Prep and Dishwash Sink without Indirect Drain Connection

Sanitary Drainage

Below slab sanitary drainage piping is believed to be primarily remaining from the original 1975 installation. No chronic issues with the existing drainage system were reported by the district but the condition of the piping is not known.

Kitchen area drainage has been provided with exterior grease trap. No condition issues were reported by the school

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Existing Non-Freeze Wall Hydrant



Existing Roof Drain

district and the school district confirmed the grease trap are emptied and maintained regularly.

Roof Drainage

The existing roof is composed primarily of flat EPDM roof construction with gravel stop or low parapet edging. The roof drains appeared to be in good condition and clear of debris. Emergency overflow scuppers are provided in lieu of internally piped emergency overflow roof drains.

Domestic Water Supply System

Domestic water supply piping is primarily copper piping installed throughout the original 1975 building construction and future renovation timeframes. The existing piping system and fixture trim was installed prior to enactment of the 2011 “Reduction of Lead in Drinking Water Act” which has set stricter standards for lead content in materials used within potable water piping systems.

Fire Protection

An automatic fire protection/sprinkler system has not been provided. The exhaust hood within the Kitchen has been provided with an Ansul fire suppression system.

Issues to consider:

AHMS.P.01 The existing Kitchen domestic water heater boiler appears to be in fair condition but is approaching the end of its expected useful life. Capital planning should account for replacement of the water heater in the next 5 yrs. Lack of a duplex water heater installation would cause a complete loss of hot water to the Kitchen in the event of a water heater failure.

AHMS.P.02 Existing local electric storage water heaters range in age from 2 yrs. to 10 yrs. and will need to be replaced as required when reaching their expected useful life of 10-12 years. Consideration should be given to providing

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expansion tank, and mixing valves on installations not already provided. Recirculation systems should be installed at these locations as part of any future renovation project.

AHMS.P.03 Overall most plumbing fixtures within the building are in good or fair condition but do not comply with all current ADA/ANSI A117.1 requirements. Any replacement of the fixtures should address all ADA/Accessibility issues as well as current water and energy conservation requirements. Consideration should be given to renovations permitting new plumbing fixture installation in accordance with ADA/ANSI A117.1 accessible requirements.

AHMS.P.04 Consider installing electronic hands-free metering faucets with Lav Shield covers below existing lavatory installations to prevent tampering with exposed faucet supplies and electronics. ASSE certified tempering valves should be provided at all handwashing fixtures for scald protection as required by current plumbing codes.

AHMS.P.05 Consider installing hands-free sensor operated flush valves on public use toilets.

AHMS.P.06 The potable water distribution system should be tested for lead. Lead reduction filters should be installed at all drinking fountains and potable water outlets intended for human consumption as required based on test results. Domestic water supply piping within the original construction area should be inspected for internal condition and replaced as required.

AHMS.P.07 All domestic hot water piping should be insulated to comply with current energy codes. Domestic cold water piping should be insulated to prevent condensation and potential mold growth in concealed locations.

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- AHMS.P.08 Future connection of the existing emergency generator to the existing gas supply should be connected upstream of the main building shutoff valve in accordance with NFPA-101 Life Safety requirements. The existing pipe sizing and service/regulator should be evaluated to determine the cause of the intermittent low pressure issues experienced at the emergency generator.
- AHMS.P.09 Consider providing existing non-freeze wall hydrants with locking covers to prevent tampering and vandalism.
- AHMS.P.10 Provide emergency/safety plumbing fixtures in any area where caustic, corrosive or injurious chemicals are used or dispensed in accordance with OSHA regulations and ANSI Z358.1. Review MSDS information to determine required emergency fixtures. Possible locations could include mechanical rooms with chemical treatment equipment, Janitor/Custodial closets, Nurse's area, etc.
- AHMS.P.11 Auxiliary hose connections should be provided for connection of cleaning solution equipment to avoid connecting the equipment directly to the utility faucet.
- AHMS.P.12 The addition of wash down boxes in gang toilet rooms should be looked into to aid in the cleaning of the toilet rooms.
- AHMS.P.13 Renovations to the kitchen would require new plumbing below slab. Floor sinks and indirect drain connections should be provided for all food prep and dishwashing equipment as required by current plumbing codes
- AHMS.P.14 Exposed drainage piping should be replaced with sanitary stainless steel or chrome plated copper corrosion resistant piping.

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AHMS.P.15 Consider providing an automatic sprinkler system throughout the building to attain a “fully sprinklered” building as part of any significant future renovation project. AHMS.BI.04 Renovate nurse’s suite to provide adequate toilet room and exam room.

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Abington Heights High School front entry



High School site



Cracked paving at front entry; steep sloping sidewalk with no handrails; vegetation growth between sidewalk joints

HISTORY

Abington Heights High school was constructed in 1966. A two-story academic wing was added in 1997 and other parts of the building were renovated at that time. There has also been recent work at the football field and the fieldhouse building.

BUILDING STATISTICS	
Size of Building	approximately 200,100 SF
Building Footprint	approximately 135,000 SF
Size of Site	approximately 37.5 acres (shared)
2021-2022 Enrollment	1130 students
Grades	Ninth Grade – Twelfth Grade
Ninth Grade	300 students
Tenth Grade	305 students
Eleventh Grade	259 students
Twelfth Grade	266 students

SITE

Vehicular Circulation and Parking

There is one drive into the high school site. There is a secondary entrance from Beynon Drive, but this is not used as a primary route. The main parking lot is adjacent to the front entrance of the school. The bus loop drive is to the north of that lot and intersects the drives that service the parking area. A secondary parking lot for staff is located to the east of the building.

Issues to consider:

AHHS.S.01 Reconfigure lanes to separate buses and student/parent/staff cars at arrival and dismissal.

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Cracking in staff parking lot



Surface cracking at main entry sidewalk



Courtyard at front entry

Sidewalks and Paving

There is a sidewalk that wraps around the west, south, and east sides of the building. The sidewalks are mostly in fair condition, with just some wear on edges or surface cracking.

The drives and parking lots are in fair/poor condition with significant cracking in some areas.

Issues to consider:

AHHS.S.02 Mill and overlay asphalt within ten years.

Courtyards

There are two courtyards within the school building. Both are concrete paving with garden beds throughout. Both courtyards have significant cracking in pavement and the concrete benches. The vegetation is overgrown and unkept. The courtyards are not ADA accessible since they are about 6" lower than the finished floor level access point.

Issues to consider:

AHHS.S.03 Re-pave courtyards to have ADA compliant access and new surfacing.

AHHS.S.04 Repair or remove built-in benches.

AHHS.S.05 Clean up courtyard overgrowth and repair garden beds (block walls).

BUILDING EXTERIOR

Façade

The façade is primarily comprised of white brick, red brick, white EIFS and blue metal panels. The façade appears to be in fair condition.

Fenestration

Fenestration consists of metal windows and storefront and doors. Storefront systems at the courtyards have significant paint chipping and rust. Window systems in the 1995 addition are single-pane, uninsulated frames. While most

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Courtyard outside of cafeteria

fenestrations appear to be in good condition, they are not well insulated and therefore experience significant heat loss.

Issues to consider:

AHHS.BX.01 Repair/repaint storefront systems in courtyard (painted steel).

Roof

The roof is a low slope white TPO roofing system. The roof is in fair condition. There is some age/wearing at the academic wings of the building, but no problems were reported.

Issues to consider:

AHHS.BX.02 Plan for roofing repairs within the next ten years because of the age of the roof.



Non-compliant room signage

BUILDING INTERIOR

ADA Compliance

Access to the main office is ADA accessible with a ramp on the exterior. There are no level changes once on the main floor. The second floor on the 1995 addition has an associated elevator. The pool level (lower level) on the opposite side of the building is accessed by a second elevator.

Room signage throughout the building is not code compliant. The signage must have a room name, room number, and associated braille. It must be mounted 48" – 60" above finished floor (AFF), 9" away from door jamb.

Most toilet rooms throughout the building do not provide the needed clearances, equipment, and fixture heights to meet ADA requirements. Some of these restrooms do not have door entry clearance. Most restroom spaces would need to be completely demolished and reconfigured (possibly enlarged) to create compliant restrooms.

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Non-compliant classroom sink fixture

The sinks in casework throughout the building (mostly located in science classrooms) do not meet the height or clearance requirements for ADA compliance.

Most rooms and classroom entrances meet proper ADA clearance, except the angled entrances in the 1995 addition.

Issues to consider:

AHHS.BI.01 Replace all room signage throughout.

AHHS.BI.02 Reconstruct all restrooms (single and gang) to be ADA compliant. Expand in areas where needed.

AHHS.BI.03 Replace sinks and associated casework in rooms so that all rooms with sinks have at least (1) ADA accessible fixture.

AHHS.BI.04 Reconstruct entrances to rooms in 1995 wing to have proper clearances.



Classroom entry without compliant door clearance

Main Office

The entry vestibule is connected to the main office. The finishes are in fair condition.

Classrooms

The academic classrooms are mostly located in the wings to the east of the library/main office. The northern wing is the 2-story 1995 classroom addition.

Classrooms in the older part of the academic wing have damaged casework and chalkboards which are in need of replacement. Classrooms in these wings have VCT flooring and ACT ceilings.

The 1995 addition has carpet flooring and ACT ceiling throughout. The carpet is in poor condition. The entrances are not ADA compliant, as mentioned above.

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Typical classroom in original part of building



Typical classroom in 1995 addition



Cafeteria



Auditorium

Issues to consider:

AHHS.BI.05 Replace casework and chalkboard in original part of building to accommodate new technology/teaching surfaces.

AHHS.BI.06 Replace carpet with a more durable surface like VCT in 1995 wing (both floors).

Corridors

Corridors throughout the original building have terrazzo floors with ACT ceilings. Most of the terrazzo is in fair condition but there is some cracking/breakage in certain areas.

Corridors in the 1995 addition have carpet which should be replaced.

Issues to consider:

AHHS.BI.07 Replace carpet with a more durable surface like VCT in 1995 wing (both floors).

Cafeteria

The cafeteria is centrally located within the building and is adjacent to a courtyard. The floor is VCT and the ceiling is folded gypsum. The finishes are in good condition.

Auditorium

The auditorium has seating with carpeted aisles and exposed concrete under the seats. The ceiling is gypsum board with recessed lights. The seats, carpeting, and painted concrete floor are in poor condition. There are no areas for ADA compliant seating.

Issues to consider:

AHHS.BI.08 Replace carpet and seats within auditorium.

AHHS.BI.09 Create ADA seating areas.

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Library

Library

The library is located in the center of the school. There is a skylight that allows natural light into the space. While the space is large, it is underutilized and outdated. The flooring is carpet and the ceiling is ACT. The carpet is in poor condition.

Issues to consider:

AHHS.BI.10 Renovate library for a more flexible, STEM driven environment. Replace carpet with a more durable material like VCT.



Main Gymnasium

Gymnasium

The main gymnasium has a wood floor and open ceiling. The finishes are in good condition.

Pool

The pool and finishes are in fair condition. There is built-in bleacher seating which does not provide ADA compliant access.



Pool

Issues to consider:

AHHS.BI.11 Renovate bleacher/seating are to provide accessible seating.

Fieldhouse

The fieldhouse is at the north end of the site (located adjacent to the fields). The fieldhouse is two-stories and the main level is the second level, accessed from the parking lot. The building contains weight rooms and training rooms for the athletics programs. Finishes, fixtures, locker rooms, and toilet rooms are all in fair condition and compliant.



Fieldhouse

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HVAC

Central Heating Plant

Building hot water is generated by three separate boiler plants. The first (main boiler room) contains two Patterson-Kelley Thermific natural gas boilers. These are in poor condition and should be scheduled for replacement within the next 5 years. The base-mounted pumps associated with the boilers are in fair condition. The boiler flue system has deteriorated and shows signs of corrosion and should be inspected and repaired as necessary as part of the boiler replacement project.



Existing Patterson-Kelley
"Boiler Room" Boilers

The boilers in the second plant (Addition boiler room) were manufactured in 1996 and appear in fair condition. These are also Patterson-Kelley boilers. While they have reached the end of their expected service life priority should be given to replacing the main boiler room pair. Despite the fair condition of the boilers, the piping and accessories associated with this plant are in poor condition and indicate signs of corrosion and rust that would not be anticipated for a system of this age. The associated base mounted pumps are in fair condition (1 has had a motor replacement) and the inline pumps appear to be in good condition.



Existing Patterson-Kelley
"Toilet Room" Boilers

The third plant (toilet room boiler room) is in the best condition of the three. This room also contains two Patterson-Kelley 2000 MBH Thermific gas-fired boilers. Primary and secondary loop pumps are present and both are in good condition. No issues were observed with the piping, accessories, or breaching.

Central Cooling Plant

The building does not have a central cooling plant. Select areas (computer labs, auditorium, administration, drafting lab, etc.) are cooled through packaged or split-system units.

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Auditorium/Stage

The auditorium and stage are served through a ducted, overhead system. Distribution appeared adequate with large, overhead ceiling diffusers providing conditioned air and low return grilles located near the front of the Stage. The units are located above the stage and appeared to be in fair condition.

Cafeteria and Kitchen

The cafeteria and kitchen areas are provided with heating and ventilating only and the Kitchen transfers conditioned air in from the cafeteria as make-up for the exhaust systems. The cafeteria contains ceiling fans to assist with stratification of volume spaces and the supply air is distributed from the interior making the space difficult to control.

Kitchen exhaust hood is connected to an upblast grease fan located on the roof. An ansul system was observed within portions of the hood to protect certain equipment types as required by code. A dedicated exhaust fan serves the dishwasher condensate hood. The fans' vintage is unknown. The kitchen grease hood is also equipped with a make up air unit located on the roof.

Administration and Nurse

The administration and nurse areas are served by packaged units with overhead ductwork. Perimeter heat is present for zone control and exhaust is present where anticipated. The condition of the units was not observed.

Gymnasium

The main gymnasium is served by mezzanine-mounted, exposed air handling units that blow supply air directly into the space with minimal ductwork. The units are in fair condition and effective but they can be noisy and provide poor distribution of ventilation. The center of the gymnasium contains large gravity relief ventilators that are operable and

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in good condition. It is unclear if demand controlled ventilation (utilizing CO2 monitoring) is present and part of the sequence of operations for these units.



Auxiliary gymnasium supply air ductwork distribution

The auxiliary gym is served by a rooftop unit. Supply air is ducted appropriately throughout the space providing proper air distribution and it features a high return air system. All components within the space are in good condition. The condition of the rooftop unit was not observed but it was believed to have been installed in 1997.

The weight room is served by a ducted, overhead system. It was unclear at the walkthrough if this space was conditioned or if the system functioned for heating and ventilation only.

Locker Rooms

The girls' and boys' locker rooms are served by ducted systems above plaster ceilings. They are heated and ventilated as required. The condition of the systems could not be observed due to the existing plaster ceiling in these spaces.

Classrooms and Support Spaces

A majority of the classrooms contain hot water heating and ventilating under-window unit ventilators. It appears a majority of these units were installed in 1997 but several observed units were believed to be original to the building. The Orchestra room and several other auxiliary classrooms did not appear to have air-conditioning but it should be present for the program within the space.

Science Rooms

Science classrooms typically featured un-ducted horizontal unit ventilators (below the ceiling). General space exhaust was not observed. Fume hoods were noted to be functional and in good condition, although not apparently in-use by the program for all spaces.



Science classroom fume hood

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Natatorium

The natatorium is served through a ducted dehumidification system that utilizes sidewall supply grilles (above the spectator area) and low-return grilles appropriately located at the deck to remove chloramines from the pool surface. The supply distribution method is not ideal by today's standards but no apparent issues were observed within the space. The unit itself was replaced approximately five years ago and was noted to be in good condition.



Technical education lab with dust collector array

Technical Education and Art

The Technical Education spaces are well equipped and diverse. The associated classrooms feature systems that are typical of the building itself (unit ventilators, etc.) but additional systems have been provided to serve specific trades such as:

Automotive Lab: Rooftop unit, gas-fired unit heater, air filtration system, and vehicular exhaust systems. All systems observed appeared in fair condition except the filtration system which appeared to be new.

Wood Shop: The dust collector and associated ductwork appear to be in very good condition.

Masonry Lab: Served by a ducted heating and ventilating system, exposed within the space. Recirculating air filtration units are present but appear small for the space served and could be supplemented with additional units if a filtration issue is present.

Art Rooms: Served by an under-window unit ventilator with a vent through the roof. There is a capture hood for pottery and the kiln is vented through a base exhaust system (best practice). A second kiln has a dedicated capture exhaust hood. A paint spray booth is present and in good condition but used for storage and does not appear to be in service.

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Terminal Heating Equipment

Terminal heating equipment such as baseboard radiation, convectors and cabinet heaters are present to heat auxiliary spaces and to provide comfort heating to several occupied spaces. Most components appear to be original or were replaced in 1997. The expected service life for these heaters ranges from 20-25 years but no apparent issues were observed.

Exhaust Air Systems

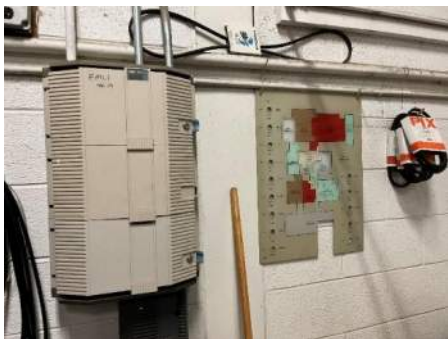
Exhaust fans were observed serving the janitor's closet, kitchen, toilet rooms, and other areas of the building in conformance with the requirements of the International Mechanical Code. The fans are believed to be in working order and no apparent deficiencies were noted. The ASHRAE Median Service Life for exhaust fans is 20 years.

Ductwork and Piping Systems

The supply, return and exhaust air ductwork appeared to be galvanized steel sheet metal and in acceptable condition. The ASHRAE Median Service Life for ductwork is 30 years. Ductwork systems are minimal in a majority of the building due to the terminal units that are present. Piping and insulation within the main boiler room and addition boiler room are in poor condition and the insulation shows severe signs of degradation. Piping and insulation should be replaced on an as-needed basis.

Automatic Temperature Controls

Majority of the building is controlled by a Direct Digital Controls (DDC) Johnson Controls Metasys system. The system provides an internet based central Building Automation System (BAS) that provided graphical representation and points from the HVAC systems throughout the building. It was explained that the building fully resides on this DDC system, but a pneumatic air compressor was observed in the main boiler room that appeared to be functional.



New JCI Metasys controller (left) and old ATC zone board (right)

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Issues to consider:

AHHS.HVAC.01 As part of a major renovation, consider a whole building conversion to a 4-pipe system able to heat and cool simultaneously with variable speed air-cooled chillers and high efficiency gas-fired condensing boilers.

AHHS.HVAC.02 Replace boiler room boilers immediately and consider toilet room and addition boilers for replacement in 5-10 years. Replace existing pumps and accessories with boilers.

AHHS.HVAC.03 Consider replacing the Gymnasium heating and ventilating units with a system utilizing exposed ductwork for better distribution.

AHHS.HVAC.04 Replace all terminal equipment (cabinet heaters, convectors, unit ventilators) that were not replaced in the 1997 renovation.

AHHS.HVAC.05 Consider providing CO2 sensors in densely occupied spaces (Auditorium, Gymnasium, Cafeteria etc.) as a means to reduce outside air and building utility costs when the spaces are not fully populated.

AHHS.HVAC.06 All exhaust fans and auxiliary electric heaters that are original to the building should be replaced.

AHHS.HVAC.07 If portions of the building still reside on the pneumatic ATC system they should be converted to DDC and integrated into the building-wide JCI Metasys system.



Existing medium voltage switchgear

ELECTRICAL

Electrical Distribution

The electrical service enters the building into a General Electric medium voltage switchgear that is original to the building dated 1967. There are three distribution sections in the medium voltage gear that extend out and feed different parts of the building. The size of the section is unknown. Distribution section 1 feeds the boiler room, shops/

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*Bus taps on 2000A 480/277V
G.E. Switchboard*

maintenance areas, auxiliary gym, swimming pool, and industrial arts wing. Distribution section 2 feeds sections C and D of the building. Distribution section 3 feeds sections A and B of the building including the newer wing portion of the building. In the same room section 1 feeds an original GE medium voltage switch which feeds an inline GE cast coil transformer and 2000A 480/277V GE distribution equipment. The equipment appears to be original to the building. There does not appear to be a main breaker section on the switchboard. The switchboard contains (11) feed breakers on the front of the gear and (3) bus tapped disconnect switches mounted on the back of the distribution section. The 480/277V distribution system is utilized for various mechanical and lighting loads throughout the building. There seemed to be a mix of distribution equipment manufacturers. All original distribution equipment was observed to be manufactured by General Electric, equipment that was implemented during the 1997 renovation appears to be manufactured by Siemens, and newer miscellaneous equipment is manufactured by Square D.

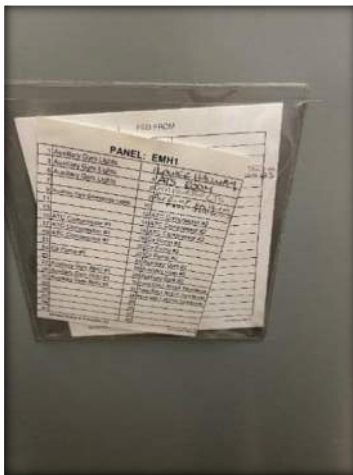
It is recommended that the old General Electric equipment be replaced including, but not limited to the medium voltage switchgear, the 2000A 480/277V switchboard, the cast coil transformer, medium voltage switch, and distribution panelboards.

Emergency Generator

There is a 250KW 480/277V Kohler diesel generator that appears to be in newer condition. There are (2) output breakers inside the generator a 400A and 60A. There appears to be (2) automatic transfer switches (ATS) that separate life-safety lighting loads from other (non-life-safety) loads designated for standby generator power such as minimal building heat. However, when reviewing the circuits in a panelboard meant to be designated for equipment power there appears to be a mixture of life safety and equipment circuits. This generator appears to be in good condition. It is undetermined if most network systems are on generator back-up power, however any data racks, intercom/paging and phone systems not currently on the

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generator, should be added to the generator for emergency back-up.



Equipment panelboard with life safety circuits

Current codes call for selective coordination on the life safety portion of the emergency generator. There appears to be selective coordination issues with the life safety distribution due to the main output breaker in the generator being rated at 60A.

It is recommended that the emergency generator distribution be reviewed and be properly separated into (2) branches of life safety and equipment power.

Lighting System

The lighting observed inside the building is a mixture of fluorescent and newer LED lighting. The building has a mixture of lensed 2x4, parabolic 2x4, pendant type, and industrial linear fixtures. The majority of the building utilizes fluorescent type fixtures. Some select LED fixtures were observed in the Auditorium, Wrestling Gym, Kitchen, and select areas of the building. Some automatic shut-off controls (occupancy) sensors were observed in the building as required by current energy codes. Some rooms were not observed to have lighting control sensors in them. It is recommended to expand the existing system to include automatic controls for the entire building.

Building exterior lighting appears to be LED fixtures. Some fixtures appear to be newer and in good condition. Other fixtures appear to be worn and should be replaced.

It is assumed that emergency lighting is provided throughout the building utilizing unswitched 24/7 fixtures.

The majority of lighting fixtures observed are in working condition. Consideration should be given that the entire building be replaced with LED fixtures for reduced maintenance and energy savings. Consideration should also be given to expanding the existing lighting control system to automatically shutoff lighting when the areas are unoccupied.

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Category 5 cabling

Data/Network System

The data network solution observed consists mostly of cat 6 and some cat 5. There are multiple floor mounted racks located throughout the building for network distribution. The rack locations observed did not appear to have some sort of wall mounted mini split cooling system. There are wireless access points located throughout the building.

It is recommended that additional wireless access points and additional data drops should be considered for future upgrades.

Fire Alarm System

The existing fire alarm system is a Simplex 4100ES system. This system is capable of voice activated notification, but was noted to not being used as a voice system. The head end system must have been recently replaced with the voice system, but the notification devices still utilize horn/strobe. Smoke detection and notification devices are provided throughout the building. The system appears to be in good condition, however current code requires voice notification and the existing system and devices utilizes horns/strobe notification. Significant renovations or modifications to this system or building will require the systems be upgraded to the current code.



Simplex 4100ES fire alarm control panel

Intercom/Public Access/Clock System

Original wall mounted clock/speaker units were observed throughout the building. The clocks are National Time and appear to be dated. The headend clock control is AllSync IQ by American Time and appears to be newer. The existing intercom system utilizes a Dukane head end and is in poor condition. The system was noted to be failing and having issues announcing throughout the building. The existing phone system is a Mitel Voice Over IP (VOIP) and appears to be in adequate condition.



Existing PA rack on wheels

It is recommended that the existing public address system be upgraded to an I.P. intercom system. PA system is beyond end of life and should be replaced immediately. It is recommended that old National Time clocks be replaced as these are nearing end of life as well.

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Building Security System

There is an existing Radionics intrusion system for the building with perimeter door contacts and interior motion detection. The system appears to be in fair condition. The District should review operational and security needs and provide additional motion detection if deficiencies are noted.

A Galaxy door access control system head end was observed. The District should review operational and security needs and provide additional door access controls if deficiencies are noted.

There were Hikvision interior dome IP cameras observed inside the building. The network recorder was unobserved, but is believed to be manufactured by Hikvision. The District should review operational and security needs and provide additional cameras where desired.

The main office was utilizing AiPhone LEF-5 desk model for communication at the front entrance of the school. The system appears to be dated and should be replaced soon.

Issues to consider:

AHHS.EL.01 It is highly recommended that the Medium Voltage electrical distribution for the building and all panelboards that are original to the building be replaced.

AHHS.EL.02 Consideration should be given to upgrading classroom lighting with new LED fixtures, and expanding code required automatic lighting controls for reduced maintenance and energy savings.

AHHS.EL.03 It is recommended that additional wireless access points and additional data drops should be considered for future upgrades.

AHHS.EL.04 It is recommended that the existing clock and intercom systems be upgraded to newer systems including wireless clock correction and non-centralized I.P. intercom system.

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AHHS.EL.05 The District should review operational and security needs for the building and provide additional door access controls, surveillance cameras, and motion detectors where deficiencies are noted.



Existing Domestic Water Service



Existing Main Building Domestic Water Heater

PLUMBING

Domestic Water Service

The building has been provided with public domestic water service served from an on-site meter pit. The meter pit was not accessible during the survey and is assumed to contain the water meter and main service backflow preventer. The main 4" Domestic water service for the building is located in area within the Athletic wing of the building and includes a main shutoff valve. A limited area sprinkler system serving the Outdoor storage and Gym storage area connects to this service and includes a 4" RPZ backflow preventer. No test tag was observed on the backflow preventer. An on-site meter pit serves domestic water supply piping to the school but was not accessible during the survey. A second 3" domestic water service enters the building in the in the 400 wing addition. The backflow preventer originally installed on this service has been removed.

Septic/Sewage

The building drainage system is served by public sewer system.

Domestic Water Heating

The existing domestic water heating system serving the main building includes an indirect fired hot water generator/heat exchanger and two storage tanks. The heat exchanger has been recently replaced and appears to be in good condition. One tank has been replaced in 2017 and appears to be in good condition. The second storage tank appears to be a remaining electric hot water generator which was decommissioned and is being used as a storage tank only.

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Existing Domestic Water Heater and Observed Leak

Interconnecting piping is missing insulation in several locations and is heavily corroded. Recirculation pump and thermostatic master mixing valves were observed and appear to be in fair condition.

A second gas fired storage type water heater serving the new addition/400 wing is located in a Mechanical Room 431. The water heater was installed in 2009. Signs of leakage were observed and the water heater has reached the expected 10 year service life for these heaters.



Existing Domestic Water Heater and Observed Leak

Fuel Gas System

The school has been provided with natural gas service supplied by UGI. A single service has been provided to serve building heating, domestic water heating, and kitchen equipment. The district has reported that the high school is at maximum capacity for the available UGI gas service and any future increase of connected load would require infrastructure upgrades. The existing meter is an older style, large diaphragm meter and has not been provided with a protective enclosure or bollards.



Plumbing Fixtures

In general, the plumbing fixtures are a mix of fixtures provided during the original building construction and additions. Most toilet room fixtures include flush valves with manual operation and wall hung lavatories with mechanically metered or manual faucet controls. Most toilet fixtures are dated and do not comply with current ADA/ANSI A117.1 accessibility requirements.



Existing Toilet Room Plumbing Fixtures

Plumbing fixtures within the Locker Room Gang Toilet rooms include floor mounted water closets and wall hung urinals with manual flush valves, and wall hung lavatories with mechanical metered faucets, and gang showers with tempered water supply. Some shower room areas are currently being used as storage areas. In general, most fixtures are in fair but dated condition. Lavatories have not been provided with thermostatic tempering valves required by current plumbing code. These toilet room installations do

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Existing Electric Water Coolers

not comply with all ADA/ANSI A117.1 accessibility requirements.

Existing classroom sinks are generally in dated but fair condition and do not all comply with ADA/ANSI A117.1 accessibility requirements. Art room sinks include solids interceptors/plaster traps on the drainage piping.

Electric water coolers with bottle filling stations have been retrofitted in some area but most installations do not comply with current ADA/ANSI A117.1 accessibility requirements.



Existing Janitor Service Sinks

Existing janitor service sinks are wall hung and not easily used for emptying buckets or other Janitorial functions, and the utility faucets are in poor condition. Auxiliary hose connections have not been provided for connections to cleaning solution dispensers. Several janitorial sinks are located within gang toilet areas and not within dedicated janitorial closets.

Several kitchen food prep sinks and the dishwasher have been installed without code required indirect drainage to prevent backup of sanitary drainage into food prep bowls. Drainage piping in several sinks is also installed without the code required venting which could lead to siphoning of the traps. Existing epoxy coated floor sinks have begun to chip and corrode which is a less sanitary installation and could be cited by local DOH inspectors.



Food Prep Sink without Indirect Drain Connection and Corroded Floor Sink

Sanitary Drainage

Below slab sanitary drainage piping is believed to be a mostly remaining from the installation of the associated building area. No chronic issues with the existing drainage system were reported by the district but the condition of the piping is not known. Science classrooms have been provided with chemical resistant drainage piping systems and an exterior acid neutralizing tank.

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Kitchen area drainage has been provided with individual steel grease traps recessed within the kitchen floor. No condition issues were reported by the school district and the school district confirmed the grease traps are emptied and maintained regularly.

Roof Drainage

The existing roof is composed primarily of flat roof construction with internally piped roof drainage. No issues with the existing roof drainage system were reported by the district.

Domestic Water Supply System

Domestic water supply piping is primarily copper piping installed throughout the original building construction and future renovation timeframes. The existing piping system and fixture trim was installed prior to enactment of the 2011 “Reduction of Lead in Drinking Water Act” which has set stricter standards for lead content in materials used within potable water piping systems.

Fire Protection Systems

An automatic fire protection/sprinkler system has not been provided. A limited area system serves the existing outdoor storage and Gym storage areas.

The exhaust hood within the Kitchen has been provided with an Ansul fire suppression system.

Issues to consider:

AHHS.P.01 The existing main building central domestic water heating plant appears to have been partially replaced in 2017 and is in fair condition. Consideration should be given to decommissioning the second storage tank and replacement of corroded interconnecting piping within the system. The secondary water located in the 400 wing has visible signs of leaks beginning

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and has reached the end of its expected useful life and should be replaced. Capital planning should account for replacement of the water heater as soon as possible. Lack of a duplex water heater installation would cause a complete loss of hot water for this building area in the event of a water heater failure.

AHHS.P.02 Overall most plumbing fixtures within the building are in fair condition but do not comply with all current ADA/ANSI A117.1 requirements. Any replacement of the fixtures should address all ADA/Accessibility issues as well as current water and energy conservation requirements.

Consideration should be given to renovations permitting new plumbing fixture installation in accordance with ADA/ANSI A117.1 accessible requirements.

AHHS.P.03 Consider installing electronic hands-free metering faucets with Lav Shield covers below existing lavatory installations to prevent tampering with exposed faucet supplies and electronics.

AHHS.P.04 ASSE certified tempering valves should be provided at all handwashing fixtures for scald protection as required by current plumbing codes.

AHHS.P.05 Consider installing hands-free sensor operated flush valves on public use toilets.

AHHS.P.06 Existing electric water cooler installations should be upgraded to bi-level ADA/ANSI compliant installations and be provided with lead reduction filters and bottle filling stations.

AHHS.P.01 Consider installing hands-free sensor operated flush valves on public use toilets.

AHHS.P.07 The potable water distribution system should be tested for lead. Lead reduction filters should be installed at all drinking fountains and potable water outlets intended for human consumption as required based on test results. Domestic water

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supply piping within the original construction area should be inspected for internal condition and replaced as required.

AHHS.P.08 All domestic hot water piping should be insulated to comply with current energy codes. Domestic cold water piping should be insulated to prevent condensation and potential mold growth in concealed locations.

AHHS.P.09 Drainage piping, especially original to the original building construction should be inspected for collapsed or broken section of pipes. Any existing piping with connections to new renovations should be flushed and inspected to verify condition. Based on reports of poor condition, complete replacement of the sanitary drainage piping below slab should be considered.

AHHS.P.10 The existing grease traps should be cleaned and thoroughly inspected for breakdown of the steel walls and other internal condition issues. The drainage piping downstream of the grease trap piping should be scoped to verify proper operation of the existing grease trap and, based on the results, consideration should be given to replacement of the existing unit with new more efficient grease interceptor. AHHS.P.08 All domestic hot water piping should be insulated to comply with current energy codes.

AHHS.P.11 Consider providing existing non-freeze wall hydrants with locking covers to prevent tampering and vandalism.

AHHS.P.12 Provide emergency/safety plumbing fixtures in any area where caustic, corrosive or injurious chemicals are used or dispensed in accordance with OSHA regulations and ANSI Z358.1. Review MSDS information to determine required emergency fixtures. Possible locations could include mechanical rooms with chemical treatment

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equipment, Janitor/Custodial closets, Nurse’s area, etc.

AHHS.P.13 Renovations to the kitchen would require new plumbing below slab. Floor sinks and indirect drain connections should be provided for all food prep and dishwashing equipment as required by current plumbing codes. Exposed drainage piping should be replaced with sanitary stainless steel or chrome plated copper corrosion resistant piping.

AHHS.P.14 Extension of the automatic sprinkler system should be provided throughout the building to attain a “fully sprinklered” building as part of any significant future renovation project.

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HISTORY

Abington Heights District office building was previously a school building and was converted to district offices in 2001. Along with the district office building, the site also houses the Maintenance/Facilities Building and the football stadium.



Abington Heights District Administration front entry



Abington Heights Maintenance/Facilities Building



District Administration Site

BUILDING STATISTICS

Size of Building	approximately 55,800 SF
Building Footprint	approximately 24,400 SF
Size of Site	approximately 7.95 acres (shared)

SITE

Vehicular Circulation and Parking

The parking lot for the site is located to the north of the building, between the district offices and the facilities building. There are approximately 60 parking spaces in this lot. There is a small lot in the rear of the building which houses about seven parking spaces. A third lot closer to the football stadium holds eight handicap accessible parking spaces for ADA compliant access to the stadium.

For a normal building operation schedule, the parking lots work well and provide adequate accommodations. There are lot overflow issues when events and football games are held at the stadium. The area has very limited street parking and a grassy field for overflow parking. Depending on weather conditions, the grass areas get destroyed from parking cars on them.

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Cracked paving at front entry

Sidewalks and Paving

There is a sidewalk from the parking lot area to the front entry as well as along the front of the building. A secondary sidewalk connecting the upper parking lot to the football stadium winds through the steep grade on the site. These sidewalks are in fair condition.

There is a guardrail at the window-well area on the south façade of the building. This guardrail has significant paint chipping and rust.

The main drive onto the site and the main parking lot is in poor condition with significant cracking in some areas.

Issues to consider:

AHDA.S.01 Sand and repaint guardrail.

AHDA.S.02 Mill and overlay asphalt within ten years.



Football stadium

BUILDING EXTERIOR

Façade

The façade is primarily comprised of red brick with a stone foundation. There are areas of limestone panels.

Fenestration

Fenestration consists of aluminum windows and storefront. Some exterior doors are wood, which are damaged and rotting. It was reported that there are two areas with window leaks as well.

Issues to consider:

AHDA.BX.01 Replace (2) damaged windows.

AHDA.BX.02 Replace door system at back entrance (locker room entrance) in entirety to prevent further wood rot.



Building facade

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Partial view of the roof

Roof

The roof is a low slope white TPO roofing system. The roof is in fair condition but is over 20 years old and out of warranty. There is some age/wearing occurring, but no problems were reported.

There are two low roofs above the stair tower exits. These have designated downspouts. The gutter penetration through the brick should be sealed.

Issues to consider:

AHDA.BX.03 Plan for roofing repairs within the next ten years because of the age of the roof.

AHDA.BX.04 Repair open areas near downspouts with flashing.



Rotting door bottom

BUILDING INTERIOR

ADA Compliance

Access into the building is ADA compliant. There is an elevator that connects all three floors of the building.

Stair guardrails and handrails throughout the building are not ADA compliant. Some of the rails are not the proper height; some do not have compliant extensions. The rear stair for the locker room entrance does not have a handrail on a portion of the stair.

Toilet rooms throughout the building are ADA compliant.

Issues to consider:

AHDA.BI.01 Add required handrails in locker room stair tower.

AHDA.BI.02 Add extension to guardrail in stair towers (3) to adjust to the required 42" height.

AHDA.BI.03 Replace railings that do not extend past the last stair tread throughout.



Guardrail that is too low; missing handrail

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Other

In addition to district offices, this building still houses its original gymnasium which is currently used for high school wrestling.

The locker rooms in the basement (original to the building) were renovated as part of the 2001 project and are currently used by the football teams when the stadium is in use.

STADIUM

The football stadium is accessed mainly from the upper parking lot. There is a series of ramps/sloping sidewalks to arrive at the stadium at the top of the bleachers. There is a press box located at the top of the bleachers as well. There is a secondary entry at street level. This level houses the restrooms and concession stand building. There is a ramp from this level to access the lower level of bleacher seating.

The stadium has no field lighting, so games must be played during the day.

MAINTENANCE COMPLEX

The maintenance complex for the district is generally in poor condition. There are three buildings that make up the maintenance complex. One is primarily used as storage, one houses storage and three offices, and the last is the maintenance garage where vehicles and equipment are worked on. The garage is in fair condition; it is the newest building of the three. The other two buildings (connected underground) are in poor condition, beyond reasonable repair. The roofs are in poor condition. The envelopes are failing with peeling façade paint and rotting wood sills, dormers, etc.

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Issues to consider:

AHDA.MB.01 Within the next 10 years, the district should plan to vacate the two buildings due to health and safety concerns.

HVAC

Central Heating Plant

The building's hot water plant consists of two 35 HP cast-iron boilers that were installed in 2001. The life expectancy of the boilers is approximately 20 years. The District should consider them for replacement in 5-10 years. The associated hot water pumps, breeching and accessories are presumed to be in fair condition and should be replaced with the boilers.

Central Cooling Plant

The building's chilled water plant consists of a roof-mounted 75 ton air cooled chiller. Unless replaced, the chiller was installed in 2001 and should be considered for replacement within the next 5 years. The estimated life expectancy is 15-20 years. The associated pumps and accessories should be replaced with the chiller.

Air Handling System

The facility is served by several different air terminal styles. Back of house areas and a majority of the offices are served by 4-pipe Fan Coil Units with ducted supply and plenum returns. Outside air is provided and pre-treated by a rooftop energy recovery unit. An indoor air handling unit serves the Locker Areas through an air-to-air heat exchanger. The systems are 4-pipe and can provide simultaneous heating and cooling, however, the boiler system is likely not utilized year-round because its style is not conducive to operating under low loads.

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Terminal Equipment

It is presumed that the fan coils are in good operating condition and should continue to be utilized and serviced as needed. Cabinet heaters are present in stairwells and at building entry points as anticipated. Radiant heating panels have been provided in the restrooms.

Exhaust Air System

Exhaust systems evaluated appear adequate by today's standards. The District should continue to operate and service the existing fans as needed.

Issues to consider:

AHDA.HVAC.01 Consider replacement of boilers and associated infrastructure in 5-10 years.

AHDA.HVAC.02 Consider replacement of chilled water plant and associated infrastructure within the next 5 years.

ELECTRICAL

Electrical Service

The electrical distribution service contains a 800A 277/480V 3 phase 4 wire main distribution panel. There are various distribution panels and transformers located throughout the building. PP&L is the electric utility company servicing the building.

Emergency Power

The building is not equipped with an emergency generator. All emergency egress lighting is achieved through the use of battery packs.

Lighting

The lighting inside the building is a mixture of fluorescent lensed and parabolic 2x4 fixtures, and compact fluorescent downlights. Exterior lighting includes HID type fixtures.

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Data Networks & Technology

The data network solution is assumed to be mostly cat 6 and some cat 5e based on the observations at other buildings in the district.

Paging/Intercom

The building is not equipped with a public address/intercom system.

Clocks

The building is equipped with a master clock system.

Access Control

Exterior doors are equipped with card readers. It is undetermined if all exterior doors are equipped with card readers.

Intrusion Detection

The building is equipped with an intrusion detection system with interior motion sensors and door contacts on all exterior doors. There are keypads located on the lower and main levels.

Fire Alarm

The building is equipped with a fire alarm system. It is assumed the fire alarm system is a horn/strobe system.

Sound System

The board room area is equipped with a local sound system.

PLUMBING

Domestic Water Service

The building has been provided with a 2" public domestic water service.

Septic/Sewage

The building drainage system is served by public sewer system. A sewage ejector serves drainage for floor and equipment drains in the lower boiler room.

Domestic Water Heating System

The existing domestic water heating system serving the main building is located in the basement Mechanical room and

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includes a 50 gal, 65 MBH gas fired storage type water heater, and hot water recirculation.

Plumbing Fixtures

Plumbing fixtures were replaced during the 2001 renovation and include wall hung water closets and wall hung urinals with manual operated flush valves, and wall hung lavatories with manual faucets. Toilet room installations were updated to include ADA installations in 2001 but do not comply with all current ADA/ANSI A117.1 accessibility requirements. Lavatories have not been provided with thermostatic tempering valves required by current plumbing code.

Sanitary Drainage

Portions of the below slab sanitary drainage piping serving the building is believed to be remaining from the original building construction and condition is unknown. Most above slab sanitary drainage was replaced during the 2001 renovation and is assumed to be in good condition.

Roof Drainage

Roof areas include flat roof construction with internally piped roof drainage. A sump pump adjacent to the elevator in the lower level has been connected to the roof drainage piping.

Fuel Gas system

The DAO has been provided with low pressure natural gas service supplied by UGI. A single service has been provided to serve building. The existing meter is an older style, large diaphragm meter. A partial security enclosure has been provided to limit accessibility to the meter assembly.

Fire Protection

A full building automatic fire protection dry sprinkler system has been provided. A dry valve and compressor are located in the lower level sprinkler room. A 4" Reduced Pressure Zone backflow preventer has been provided on the incoming fire protection service piping.

Issues to consider:

AHDA.P.01 Plumbing fixtures do not comply with all current ADA/ANSI A117.1 requirements. Any



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replacement of the fixtures should address all ADA/Accessibility issues as well as current water and energy conservation requirements.

AHDA.P.02 ASSE certified tempering valves should be provided at all handwashing fixtures for scald protection as required by current plumbing codes.

This section consists of a district-wide summary table then a conditions worksheet for each of the schools in the district.

The conditions worksheets are intended to provide a general overview of the condition of each building as well as identify and prioritize recommended repair/maintenance items.

The sheet for each building begins with summary data including items like date of construction, size of building and site, and current occupancy. Then the condition is analyzed via four main categories (site, exterior, interior, and mechanical/electrical/plumbing) each with several subcategories. Where repairs/upgrades are recommended in a subcategory, these are presented with a description.

For each individual subcategory, a numeric ranking of 0 – 5 was assigned to assist the district in determining need/priority of each recommended item. The ranking scale is as follows:

- 0 – No need/Not applicable
- 1 – Future consideration
- 2 – 5-10 year need
- 3 – 3-5 year need
- 4 – 1-2 year need
- 5 – Immediate need

The total sum of all subcategories was then calculated and divided by 140 total possible points, leading to a Facility Condition Index score. This FCI score provides a statistical means of comparison for the condition of each school building; a higher percentage indicates a more pressing need for repairs/upgrades.

Facility	0-3 Years	3-5 Years	5-10 Years	10+ Years
Clarks Summit Elementary School	Replace older distribution equipment. Replace gas fired domestic water heater and appurtenances. Replace existing carpet and consider brighter interior finishes.	Add emergency generator and relevant equipment. Replace master clock and PA system. Upgrade fire alarm to voice system. Update Automatic Temperature Control (ATC) system. Replace plumbing fixtures and provide ADA compliant installations. Repave existing parking lots and drive lanes.	Replace lighting with LED fixtures and provide code compliant lighting controls. Replace ex. boilers and heating plant. Consider two-story academic addition to increase school capacity.	Consider major HVAC renovation that includes cooling to all portions of building. Consider major Electrical renovation for all major systems. Consider providing full sprinkler coverage and replacement of existing plumbing piping systems in coordination with any major building renovation.
Newton-Ransom Elementary	Upgrade interior door hardware/locks to address security concern. Repair roof leaks at corridor link to classroom pods. Fence in play area near tree line. Update Automatic Temperature Control (ATC) system.	Replace existing boilers and heating plant. Replace plumbing fixtures and provide ADA compliant installations.	Replace lighting with LED fixtures and provide code compliant lighting controls. Replace existing carpet and consider brighter interior finishes.	Consider major HVAC renovation that includes cooling to all portions of building. Consider major Electrical renovation for all major systems. Consider providing full sprinkler coverage and replacement of existing plumbing piping systems in coordination with any major building renovation.
South Abington Elementary	Update ATC system. Replace existing emergency lighting system.	Replace existing PA system. Replace plumbing fixtures and provide ADA compliant installations. Replace existing carpet and consider brighter interior finishes.	Replace ex. boilers and heating plant. Replace lighting with LED fixtures and provide code compliant lighting controls. Replace existing domestic water heater. Any new equipment would need to be installed above the flood plain elevation.	Consider major HVAC renovation that includes cooling to all portions of building. Consider major Electrical renovation for all major systems. Consider providing full sprinkler coverage and replacement of existing plumbing piping systems in coordination with any major building renovation.
Waverly Elementary School	Replace older distribution equipment. Consider building a new front entry addition to create secure vestibule directly adjacent to administrative suite. Consider major HVAC renovation that includes cooling to all portions of building. Consider major Electrical renovation for all major systems.	Add emergency generator and relevant equipment. Replace master clock and PA system. Upgrade fire alarm to voice system. Replace existing boilers and heating plant. Update ATC system. Replace plumbing fixtures and provide ADA compliant installations.	Replace lighting with LED fixtures and provide code compliant lighting controls. Replace existing Kitchen and main building domestic water heaters.	Consider providing full sprinkler coverage and replacement of existing plumbing piping systems in coordination with any major building renovation.
Abington Heights Middle School	Address building pressurization issues. Replace existing generator system. Replace existing Kitchen area gas fired domestic water heater, tank and appurtenances.	Update ATC system. Replace existing electrical distribution system. Consider major renovation with academic addition onto existing school or possible replacement of the entire building with a new facility.	Replace lighting with LED fixtures and provide code compliant lighting controls. Replace existing point of use electric water heaters as required.	Consider major Electrical renovation for all major systems. Consider providing full sprinkler coverage and replacement of existing plumbing piping systems in coordination with any major building renovation.
Abington Heights High School	Replace PA system. Replace medium voltage gear and distribution gear that is original to the building. Renovate existing library and surrounding area to create a new modern student learning area.	Upgrade fire alarm to voice system. Replace boiler room boiler plant. Remove second domestic hot water storage tank from service and rework piping to existing domestic water heating system.	Replace lighting with LED fixtures and provide code compliant lighting controls. Replace "new" wing boiler plant. Replace existing gas fired domestic water heater in 400 wing. Consider a STEM wing addition to address new and expanded curriculum growth.	Consider major HVAC renovation that includes cooling to all portions of building. Replace toilet room boiler plant. Consider major Electrical renovation for all major systems. Consider providing full sprinkler coverage and replacement of existing plumbing piping systems in coordination with any major building renovation.



ABINGTON HEIGHTS SCHOOL DISTRICT

Buildings and Grounds Conditions Summary

Name of School: CLARKS SUMMIT ELEMENTARY

2023

General Information

Construction Date(s)	1960
Size of Building	98,000 Squarefeet
Size of Site	14.90 Acres
Grade Levels	Half Day Kindergarten - 4th Grade
2022/23 Enrollment	441 Students
Squarefoot per Student	222

Conditions Summary

Site	Score	Remarks
Vehicular Circulation / Parking	0	Parking seems adequate
Sidewalks / Pedestrian Circulation	1	Some side walk repair is needed
Vehicular Paving	3	Paving in poor condition, especially in read of school
Storm Water Management	0	No problems reported
Student Play Area	1	Play equipment seems reasonable. However ADA accessibility is needed
Athletic Field Condition	0	Fields and stadium in good condition
SUB-TOTAL (out of 30 points)	5	17%

Building Exterior	Score	Remarks
Facade	2	Some masonry damage and cracked bricks
Fenestration	2	Several exterior exit doors in poor condition and should be replaced
Roof	2	No issues reported
Site Walls / Fencing	0	
SUB-TOTAL (out of 20 points)	6	30%

Building Interior	Score	Remarks
Flooring	4	Interior carpet in poor condition and should be replaced.
Walls	1	Most walls are masonry block and in good condition.
Int. Equip./Casework	2	Most classroom casework in fair condition. However more storage is needed.
Ceilings	1	
Security	4	The entry vestibule and the administration area are not connected. Visitors are released into the school lobby before being met by administration staff.
ADA Compliance	5	Most plumbing fixtures are not ADA compliant.
Building Code Compliance	3	The building in not sprinklered.
SUB-TOTAL (out of 35 points)	20	57%

Mechanical/Electrical/Plumbing	Score	Remarks
Heating System	3	Two 4700 MBH Weil McClain 1588 natural gas boilers were installed in 1998 and are nearing the end of their expected lives but they appeared in good condition. Hot water piping, pumps, and accessories appeared in fair condition.
Cooling Plant	4	Limited areas of the building have cooling. There is no central chilled water cooling plant.
HVAC Equipment	3	A majority of the building's HVAC equipment (UV & RTU) were installed in 1998 and has exceeded it's expected life cycle. ATC system is a JCI Metasys combination of pneumatic and digital devices and should be updated.
Electrical Service	2	Service replaced in 1998. Service is undersized if building cooling is desired. Some distribution equipment manufactured by Westinghouse shall be replaced.
Lighting System	2	Most fluorescent fixtures were noted to be replaced with LED replacement tubes. Recommend replacing all lighting with LED. Some rooms were not observed to have lighting controls. Suggest adding lighting controls throughout the building.



ABINGTON HEIGHTS SCHOOL DISTRICT

Buildings and Grounds Conditions Summary

Name of School: CLARKS SUMMIT ELEMENTARY

2023

Emergency Generator System	3	Old abandoned 20KW in door gas generator shall be removed. Recommend adding permanent generator and 2 automatic transfer switches, 1 manual transfer switch, and temporary generator hook up.
Data/Network System	1	Cat 6 cabling was observed. Appears to be adequate.
Building-wide Announcement System	2	Simplex 5100 PA system appears to be in good condition. It is estimated that the existing PA system is discontinued and may be hard to service.
Fire Alarm System	2	Simplex 4020 fire alarm system that is horn/strobe. Current code calls for voice activated fire alarm system. System is not code compliant.
Fire Suppression System	5	Building is not fully sprinklered.
Plumbing System	4	Most plumbing fixture installations are dated not ADA compliant. Gas fired domestic water heater installed in 2007 is in fair/ poor condition and has reached the end of its expected life. Piping systems are approaching end of expected life. Low pressure psi gas service is adequate to serve existing equipment. Public water service and meter pit and public sewer.
SUB-TOTAL (out of 55 points)	31	56%
SUB-TOTALS	Score	Remarks
Site	5	
Building Exterior	6	
Building Interior	20	
Mechanical/Electrical/Plumbing	31	
BUILDING ASSESSMENT TOTAL	62	
FACILITY CONDITION INDEX	44%	
*FCI Rating is percentage out of a possible 140 points		



ABINGTON HEIGHTS SCHOOL DISTRICT
Buildings and Grounds Conditions Summary
 Name of School: NEWTON-RANSOM ELEMENTARY
 2023

General Information

Construction Date(s)	1994
Size of Building	36,800 Squarefeet
Size of Site	82.70 Acres
Grade Levels	Half Day Kindergarten - 4th Grade
2022/23 Enrollment	196 Students
Squarefoot per Student	188

Conditions Summary

Site	Score	Remarks
Vehicular Circulation / Parking	1	Small parking area separate from visitor's parking
Sidewalks / Pedestrian Circulation	1	Sidewalks in fair condition
Vehicular Paving	3	Paving cracks in rear of school
Storm Water Management	0	
Student Play Area	1	Fenced in area along side the front of school. Should be fenced at side area.
Athletic Field Condition	0	No fields on site
SUB-TOTAL (out of 30 points)	6	20%

Building Exterior	Score	Remarks
Facade	3	Area of plaster facade are cracked.
Fenestration	2	Some exterior exiting doors in poor condition
Roof	3	Roof in fair condition but aging. Leaks reported at link to classroom pods.
Site Walls / Fencing	2	Fencing should be added at side play area
SUB-TOTAL (out of 20 points)	10	50%

Building Interior	Score	Remarks
Flooring	4	Carpet in poor condition and should be replaced
Walls	1	
Int. Equip./Casework	3	Casework in poor condition in several areas
Ceilings	1	Existing tile ceilings in good condition
Security	3	The vestibule is not connected to the administration area. Accommodations could be made to link the two
ADA Compliance	5	Most plumbing fixtures are not ADA compliant
Building Code Compliance	3	The building in not sprinklered
SUB-TOTAL (out of 35 points)	20	57%

Mechanical/Electrical/Plumbing	Score	Remarks
Heating System	4	Two 2050 MBH Weil McClain 1588 dual fuel boilers were installed in 1995 and has exceeded the end of their expected lives. They currently operate only on natural gas. They appear in fair condition. Hot water piping is in fair condition but pumps and accessories are in poor condition.
Cooling Plant	4	Limited areas of the building have cooling. In the Pod wing the RTU provide cooling to the open areas but it is not present in the Classrooms. There is no central chilled water cooling plant.
HVAC Equipment	4	A majority of the building's HVAC equipment (UV & RTU) were installed in 1995 and has exceeded it's expected life cycle. ATC system is a Siemens Apogee that is no longer supported.
Electrical Service	2	Service is in fair condition and was installed in 1997.



ABINGTON HEIGHTS SCHOOL DISTRICT

Buildings and Grounds Conditions Summary

Name of School: NEWTON-RANSOM ELEMENTARY

2023

Lighting System	2	Most fluorescent fixtures were noted to be replaced with LED replacement tubes. Recommend replacing all lighting with LED. Some rooms were not observed to have automatic lighting controls. Suggest adding code compliant lighting controls throughout the building.
Emergency Generator System	3	No generator system. Emergency lighting supplied from battery packs.
Data/Network System	1	Cat 5e cabling was observed. Appears to be adequate.
Building-wide Announcement System	2	Dukane PA system appears to be in good condition.
Fire Alarm System	2	Simplex 4020 fire alarm system that is horn/strobe. Current code calls for voice activated fire alarm system. System is not compliant with current codes.
Fire Suppression System	4	Building is not fully sprinklered. Limited areas of the building primarily storage rooms have sprinkler coverage.
Plumbing System	3	Most plumbing fixture installations are in fair condition but not ADA compliant. Domestic Water Heater replaced in 2020 and in good condition. 2 psi gas service is adequate. Public water service. Sewer treatment system served by State Hospital and may be at maximum capacity.
SUB-TOTAL (out of 55 points)	31	56%
SUB-TOTALS	Score	Remarks
Site	6	
Building Exterior	10	
Building Interior	20	
Mechanical/Electrical/Plumbing	31	
BUILDING ASSESSMENT TOTAL	67	
FACILITY CONDITION INDEX	48%	
<small>*FCI Rating is percentage out of a possible 140 points</small>		



ABINGTON HEIGHTS SCHOOL DISTRICT

Buildings and Grounds Conditions Summary

Name of School: SOUTH ABINGTON ELEMENTARY

2023

General Information

Construction Date(s)	1955
Size of Building	37,800 Squarefeet
Size of Site	5.00 Acres
Grade Levels	Half Day Kindergarten - 4th Grade
2022/23 Enrollment	289 Students
Squarefoot per Student	131

Conditions Summary

Site	Score	Remarks
Vehicular Circulation / Parking	4	Only one vehicular access to site shared with park. Buses and cars together.
Sidewalks / Pedestrian Circulation	1	Sidewalk repair is ongoing
Vehicular Paving	3	Very limited parking onsite
Storm Water Management	4	Site is in a flood plain causing serious flooding concerns
Student Play Area	2	Play area is adequate. Security concern sharing space with neighboring park
Athletic Field Condition	0	No fields on site
SUB-TOTAL (out of 30 points)	14	47%

Building Exterior	Score	Remarks
Facade	4	Masonry failures noted in several locations
Fenestration	2	Some exterior exit doors in poor condition
Roof	1	No issues reported
Site Walls / Fencing	2	Security fencing import to separate public functions from school areas
SUB-TOTAL (out of 20 points)	9	45%

Building Interior	Score	Remarks
Flooring	3	Carpet in poor condition and should be replaced
Walls	1	
Int. Equip./Casework	2	Casework old
Ceilings	1	
Security	3	A link between the vestibule and the admin was created. Additional cameras and electronic door access should be installed
ADA Compliance	5	Most plumbing fixtures are not ADA compliant
Building Code Compliance	3	The building in not sprinklered
SUB-TOTAL (out of 35 points)	18	51%

Mechanical/Electrical/Plumbing	Score	Remarks
Heating System	3	Two 1430 MBH Teledyne Laars natural gas boilers were installed in 1998 and are nearing the end of their expected lives but they appeared in good condition. Hot water piping, pumps, and accessories appeared in fair condition.
Cooling Plant	4	Limited areas of the building have cooling. There is no central chilled water cooling plant.
HVAC Equipment	3	A majority of the building's HVAC equipment (UV & RTU) were installed in 1998 and has exceeded it's expected life cycle. ATC system is a Siemens Apogee (digital and pneumatic) that is no longer supported and should be updated.
Electrical Service	2	Service is in fair condition.



ABINGTON HEIGHTS SCHOOL DISTRICT

Buildings and Grounds Conditions Summary

Name of School: SOUTH ABINGTON ELEMENTARY

2023

Lighting System	2	Most fluorescent fixtures were noted to be replaced with LED replacement tubes. Corridors utilized LED flat panels. Recommend replacing all lighting with LED. Some rooms were not observed to have automatic lighting controls. Suggest adding code compliant lighting controls throughout the building.
Emergency Generator System	5	No generator system. Emergency lighting supplied from inverter and battery packs. Inverter is at end of serviceable life.
Data/Network System	1	Cat 5e cabling was observed. Appears to be adequate.
Building-wide Announcement System	3	Rauland PA system appears to be in fair condition but near the end of its serviceable life.
Fire Alarm System	2	Edwards EST2 fire alarm system that is horn/strobe. Current code calls for voice activated fire alarm system. System is not compliant with current codes.
Fire Suppression System	4	Building is not fully sprinklered. Limited areas of the building primarily storage rooms have sprinkler coverage.
Plumbing System	3	Most plumbing fixture installations are in fair condition but not ADA compliant. Domestic Water Heater replaced in 2015 and in good condition. Low pressure psi gas service is adequate to serve existing equipment. Public water service and meter pit and public sewer.
SUB-TOTAL (out of 55 points)	32	58%
SUB-TOTALS		
	Score	Remarks
Site	14	
Building Exterior	9	
Building Interior	18	
Mechanical/Electrical/Plumbing	32	
BUILDING ASSESSMENT TOTAL	73	
FACILITY CONDITION INDEX	52%	
<small>*FCI Rating is percentage out of a possible 140 points</small>		



ABINGTON HEIGHTS SCHOOL DISTRICT
Buildings and Grounds Conditions Summary
 Name of School: WAVERLY ELEMENTARY
 2023

General Information

Construction Date(s)	1926
Size of Building	40,000 Squarefeet
Size of Site	4.20 Acres
Grade Levels	Half Day Kindergarten - 4th Grade
2022/23 Enrollment	310 Students
Squarefoot per Student	129

Conditions Summary

Site	Score	Remarks
Vehicular Circulation / Parking	3	Tight site results in challenges for bus and parent pick up/drop off
Sidewalks / Pedestrian Circulation	2	Side walks in fair condition
Vehicular Paving	3	Cracked paving noticed throughout
Storm Water Management	1	No problems reported
Student Play Area	2	ADA access should be provided to play equipment
Athletic Field Condition	1	Small baseball field adjacent to school
SUB-TOTAL (out of 30 points)	12	40%

Building Exterior

Building Exterior	Score	Remarks
Facade	3	Masonry failing around lower parks of original school building
Fenestration	2	Insulated windows in good condition
Roof	2	Some ponding noticed on lower roofs
Site Walls / Fencing	2	Fencing around children's play areas in poor condition
SUB-TOTAL (out of 20 points)	9	45%

Building Interior

Building Interior	Score	Remarks
Flooring	1	Carpet in good condition. Recently replaced
Walls	1	
Int. Equip./Casework	1	Casework in classrooms in fair condition
Ceilings	1	Ceilings in fair condition
Security	4	The entry vestibule and the administration area are not connected. Visitors are released into the school lobby before being met by administration staff.
ADA Compliance	5	Most plumbing fixtures are not ADA compliant
Building Code Compliance	3	The building is not sprinklered
SUB-TOTAL (out of 35 points)	16	46%



ABINGTON HEIGHTS SCHOOL DISTRICT
Buildings and Grounds Conditions Summary
 Name of School: WAVERLY ELEMENTARY
2023

<i>Mechanical/Electrical/Plumbing</i>	<i>Score</i>	<i>Remarks</i>
Heating System	4	Two HB Smith 28A natural gas boilers were installed in 1996 and have exceeded the end of their expected lives. They appear in fair condition. Hot water piping is in fair condition but pumps and accessories are in poor condition.
Cooling Plant	4	Limited areas of the building have cooling. There is no central chilled water cooling plant.
HVAC Equipment	4	A majority of the building's HVAC equipment (UV & RTU) were installed in 1996 and has exceeded its expected life cycle. ATC system is a JCI Metasys combination of pneumatic and digital devices and should be updated.
Electrical Service	2	Service replaced in 1995. Service is undersized if building cooling is desired. Some older distribution equipment manufactured by Siemens should be replaced.
Lighting System	2	Mix of fluorescent and LED fixtures. Recommend replacing all fluorescent lighting with LED. Some rooms were not observed to have lighting controls. Suggest adding lighting controls throughout the building.
Emergency Generator System	3	No emergency generator. Emergency lighting handled through Emergi-Lite inverters. Recommend adding permanent generator and 2 automatic transfer switches, 1 manual transfer switch, and temporary generator hook up.
Data/Network System	1	Mixture of cat 6 and 5e cabling. Appears to be adequate.
Building-wide Announcement System	2	Existing Dukane PA system appears to be in good condition, but is dated and nearing end of life.
Fire Alarm System	2	Simplex 4020 fire alarm system that is horn/strobe. Current code calls for voice activated fire alarm system. System is not code compliant.
Fire Suppression System	4	Building is not fully sprinklered. Limited areas of the building primarily basement Boiler and storage rooms have sprinkler coverage.
Plumbing System	3	Most plumbing fixture installations are dated but in fair condition but not ADA compliant. Kitchen domestic water heater appears to be in fair condition, main building water heater in Boiler room appears to be in fair condition (Installation dates not known) . Low pressure gas service is adequate to serve existing equipment. Public water service and public sewer provided.
SUB-TOTAL (out of 55 points)	31	56%
<i>SUB-TOTALS</i>	<i>Score</i>	<i>Remarks</i>
Site	12	
Building Exterior	9	
Building Interior	16	
Mechanical/Electrical/Plumbing	31	
BUILDING ASSESSMENT TOTAL		
	68	
FACILITY CONDITION INDEX		
	49%	
*FCI Rating is percentage out of a possible 140 points		



ABINGTON HEIGHTS SCHOOL DISTRICT

Buildings and Grounds Conditions Summary

Name of School: ABINGTON HEIGHTS MIDDLE SCHOOL

2023

General Information

Construction Date(s)	1975
Size of Building	140,200 Squarefeet
Size of Site	82.70 Acres
Grade Levels	5th Grade - 8th Grade
2022/23 Enrollment	1105 Students
Squarefoot per Student	127

Conditions Summary

Site	Score	Remarks
Vehicular Circulation / Parking	3	All vehicles enter from singular access point. Tight circulation with morning drop off. Parents have to que on Newton Ransom Blvd in afternoons for pick up.
Sidewalks / Pedestrian Circulation	4	Side walks along curved area in very poor condition. Hazardous in some areas.
Vehicular Paving	4	Paving poor throughout parking and drive areas
Storm Water Management	2	A large retention area at lower site. Due to ponding water should have a fence.
Student Play Area	3	Student play area is very limited in type of equipment (only swings)
Athletic Field Condition	2	No sports fields currently on site. Several should be added.
SUB-TOTAL (out of 30 points)	18	60%

Building Exterior	Score	Remarks
Façade	5	Several areas of crumbling brick around lower areas of school
Fenestration	5	All windows in school are single pane uninsulated glass
Roof	1	In good condition
Site Walls / Fencing	3	Fencing should be added around retention basin at bottom of site
SUB-TOTAL (out of 20 points)	14	70%

Building Interior	Score	Remarks
Flooring	4	Carpet flooring in classrooms is old and failing. Vinyl tile in corridors.
Walls	4	Particle board walls used to create partitions in open pods. No acoustic properties or fire resistance.
Int. Equip./Casework	4	Limited casework in classrooms is old and inadequate.
Ceilings	2	
Security	5	Many exterior doors line the outside of the curved portion of the school. Several doors in poor condition. No electronic access or cameras covering that area.
ADA Compliance	5	There are many levels in the school forcing students to use stairs or antiquated chair lifts. Most plumbing fixtures not ADA compliant.
Building Code Compliance	5	No sprinklers. Some classrooms unable to lock down. Skinny curved corridors difficult to monitor.
SUB-TOTAL (out of 35 points)	29	83%



ABINGTON HEIGHTS SCHOOL DISTRICT

Buildings and Grounds Conditions Summary

Name of School: ABINGTON HEIGHTS MIDDLE SCHOOL

2023

Mechanical/Electrical/Plumbing	Score	Remarks
Heating System	4	There is no central heating plant. The building utilizes electric heating coils and terminal devices. Many are believed to be original to the building (1975).
Cooling Plant	2	A majority of the building has cooling provided by Engineered Air Rooftop Units. These units are in fair condition. There is no central chilled water cooling plant.
HVAC Equipment	2	A majority of the building's HVAC equipment has been replaced and is in fair condition. The building experiences issues with pressurization that should be addressed through control system revisions. Portions of duct systems are foamboard and not appropriate for use. ATC system is a JCI Metasys combination of pneumatic and digital devices and should be updated.
Electrical Service	4	General Electric switchboard with breaker buckets. Switchboard is in excess of 25 years old and is near the end of its serviceable life. Panelboards throughout the building are near end of life and should be replaced.
Lighting System	2	Most fluorescent fixtures were noted to be replaced with LED replacement tubes. Some areas utilized LED flat panels. Recommend replacing all lighting with LED. Some rooms were not observed to have automatic lighting controls. Suggest adding code compliant lighting controls throughout the building.
Emergency Generator System	5	Onan 30kW generator in excess of 25 years old located in main electrical room which feeds a single transfer switch. There is no separation between life-safety loads and non legally required loads. Generator system should be replaced with new code compliant system.
Data/Network System	1	Cat 5e and cat6 cabling was observed. Appears to be adequate.
Building-wide Announcement System	3	PA system appears to be in fair condition but near the end of its serviceable life.
Fire Alarm System	2	Gamewell fire alarm system that is horn/strobe. Current code calls for voice activated fire alarm system. System is not compliant with current codes.
Fire Suppression System	5	Building is not fully sprinklered.
Plumbing System	3	Most plumbing fixture installations are in fair condition but not ADA compliant. Kitchen Area gas fired domestic water heater replaced in 2009 and in fair condition but is approaching the end of its expected life. Point of use electric water heaters located in Pods and throughout building range from 2yr. to 10 yrs. and appear to be in fair or good condition. 2 psi gas service is adequate. Public water service. Sewer treatment system served by State Hospital and may be at maximum capacity.
SUB-TOTAL (out of 55 points)	33	60%
SUB-TOTALS		
	Score	Remarks
Site	18	
Building Exterior	14	
Building Interior	29	
Mechanical/Electrical/Plumbing	33	
BUILDING ASSESSMENT TOTAL		
	94	
FACILITY CONDITION INDEX		
	67%	
*FCI Rating is percentage out of a possible 140 points		



ABINGTON HEIGHTS SCHOOL DISTRICT

Buildings and Grounds Conditions Summary

Name of School: ABINGTON HEIGHTS HIGH SCHOOL

2023

General Information

Construction Date(s)	1966
Size of Building	200,100 Squarefeet
Size of Site	37.50 Acres
Grade Levels	9th Grade - 12th Grade
2022/23 Enrollment	1295 Students
Squarefoot per Student	155

Conditions Summary

Site	Score	Remarks
Vehicular Circulation / Parking	2	Vehicular traffic shouldn't travel behind school building. Consider creating additional exit from Beynon Dr. to Gravel Pond Rd.
Sidewalks / Pedestrian Circulation	2	Sidewalks need to be repaired in some areas
Vehicular Paving	3	Paving is cracked in many areas of the parking lot
Storm Water Management	1	
Student Play Area	1	
Athletic Field Condition	1	Fields in fine condition. Consider additional turf fields if possible.
SUB-TOTAL (out of 30 points)	10	33%

Building Exterior	Score	Remarks
Façade	2	Some cracking noticed. Especially around stucco portions
Fenestration	3	Some single pane windows should be replaced
Roof	2	No problems reported. Repairs will be needed in the future
Site Walls / Fencing	1	
SUB-TOTAL (out of 20 points)	8	40%

Building Interior	Score	Remarks
Flooring	2	Terrazzo corridor floors in good condition. VCT corridor and classroom floors should be replaced. Carpeted areas are poor.
Walls	2	
Int. Equip./Casework	2	Very dated and failing in some classrooms.
Ceilings	1	Old ceiling tiles should be replaced
Security	3	Additional security cameras should be installed both inside and outside of the school building
ADA Compliance	4	More ADA compliant fixtures and toilet rooms should be available
Building Code Compliance	2	Energy and indoor air quality upgrades to current code compliance advisable
SUB-TOTAL (out of 35 points)	16	46%



ABINGTON HEIGHTS SCHOOL DISTRICT

Buildings and Grounds Conditions Summary

Name of School: ABINGTON HEIGHTS HIGH SCHOOL

2023

Mechanical/Electrical/Plumbing	Score	Remarks
Heating System	2	The building has several heating plants. The "new" wing is served by two PK natural gas boilers installed in 1997 that are in fair condition. Pumps are also in fair conditions but accessories and piping condition is poor. The main boiler room contains two PK Thermific Boilers. Boilers, pumps, and accessories are in poor condition. The toilet room heating plant also contains PK boilers. These were installed in 2004 and boilers, pumps, and accessories are in good condition.
Cooling Plant	4	Limited areas of the building have cooling. There is no central chilled water cooling plant.
HVAC Equipment	3	A majority of the building's HVAC equipment (UV & RTU) were installed in 1997 and have exceeded it's expected life cycle. ATC system is a JCI Metasys DDC system.
Electrical Service	5	Original medium voltage equipment, 480/277V switchboard, and cast coil transformer shall be replaced. Old General Electrical distribution panels should be replaced.
Lighting System	2	Mix of fluorescent and LED fixtures. Recommend replacing all fluorescent lighting with LED. Some rooms were not observed to have lighting controls. Suggest adding lighting controls throughout the building.
Emergency Generator System	2	No separation between life safety and equipment branches. There appears to be an attempt made with (2) separate transfer switches, but when reviewing panel directories life safety and equipment circuits originate from the same panelboard.
Data/Network System	1	Mixture of cat 6 and 5. Appears to be adequate.
Building-wide Announcement System	5	Existing Dukane PA system is in poor condition and is failing. PA system shall be replaced immediately.
Fire Alarm System	3	Existing Simplex 4100ES system is being used as horn/strobe while it is capable of voice. Current code calls for voice activated fire alarm system. System is not code compliant.
Fire Suppression System	4	Building is not fully sprinklered. Limited areas of the building primarily storage rooms have sprinkler coverage.
Plumbing System	3	Most plumbing fixture installations are dated not ADA compliant. Main Domestic water Heater is fair condition but will require maintenance. Piping system is approaching end of expected life. Public water and sewer has been provided. Gas service is adequate for existing equipment but is currently at maximum capacity per Gas utility.
SUB-TOTAL (out of 55 points)	34	62%
SUB-TOTALS		
Score	Score	Remarks
Site	10	
Building Exterior	8	
Building Interior	16	
Mechanical/Electrical/Plumbing	34	
BUILDING ASSESSMENT TOTAL		
	68	
FACILITY CONDITION INDEX		
	49%	
*FCI Rating is percentage out of a possible 140 points		



ABINGTON HEIGHTS SCHOOL DISTRICT

Buildings and Grounds Conditions Summary

Name of School: DISTRICT ADMINISTRATION OFFICES

2023

General Information

Construction Date(s)	2001 (renovation)
Size of Building	55,800 Squarefeet
Size of Site	7.95 Acres
Facilities	District Offices, Maintenance Offices, High School Football Stadium, Stadium Restrooms and Concession

Conditions Summary

Site	Score	Remarks
Vehicular Circulation / Parking	4	Parking on a daily basis is adequate. Parking lot/field cannot handle traffic for football games.
Sidewalks / Pedestrian Circulation	2	Sidewalks need to be repaired in some areas
Vehicular Paving	3	Paving is cracked in many areas of the parking lot
Storm Water Management	0	
Student Play Area	0	
Athletic Field Condition	1	Field in fair condition.
SUB-TOTAL (out of 30 points)	10	33%
Building Exterior	Score	Remarks
Façade	1	Fair condition. Minimal cracking at stucco/limestone
Fenestration	3	Doors and window repairs in a few locations.
Roof	2	No problems reported but nearing end of useful life
Site Walls / Fencing	1	Exterior railing peeling paint
SUB-TOTAL (out of 20 points)	7	35%
Building Interior	Score	Remarks
Flooring	2	Terrazzo corridor floors in good condition. VCT corridor and classroom floors should be replaced. Carpeted areas are poor.
Walls	0	
Int. Equip./Casework	0	
Ceilings	1	
Security	2	Entry is not connected to staffed office
ADA Compliance	1	
Building Code Compliance	2	Handrails/guardrails are not compliant
SUB-TOTAL (out of 35 points)	8	23%



ABINGTON HEIGHTS SCHOOL DISTRICT

Buildings and Grounds Conditions Summary

Name of School: DISTRICT ADMINISTRATION OFFICES

2023

<i>Mechanical/Electrical/Plumbing</i>	<i>Score</i>	<i>Remarks</i>
Heating System	3	The building has hot water cast iron boilers from 2001. These will need to be replaced in 5-10 years.
Cooling Plant	2	The air cooled chiller was repalced in 2001 and has exceeded its expected life
HVAC Equipment	3	A majority of the building's HVAC equipment was installed in 2001 and have exceeded it's expected life cycle.
Electrical Service	3	800A 277/480V 3 phase 4 wire main distribution panel
Lighting System	2	Mix of fluorescent and LED fixtures. Recommend replacing all fluorescent lighting with LED.
Emergency Generator System	3	No emergency generator. All emergency lights are on a battery backup.
Data/Network System	1	Mixture of cat 6 and 5. Appears to be adequate.
Building-wide Announcement System	0	N/A
Fire Alarm System	1	
Fire Suppression System	2	Some rusting pipes were noted
Plumbing System	0	
SUB-TOTAL (out of 55 points)	20	36%
<i>SUB-TOTALS</i>	<i>Score</i>	<i>Remarks</i>
Site	10	
Building Exterior	7	
Building Interior	8	
Mechanical/Electrical/Plumbing	20	
BUILDING ASSESSMENT TOTAL	45	
FACILITY CONDITION INDEX	32%	
*FCI Rating is percentage out of a possible 140 points		

Abington Heights School District Construction Options Introduction

This section presents a series of long-term capital project options that the district may consider to address operational, programmatic, and building condition deficiencies identified in sections 4, 5, and 6 of this report. As detailed below, these are organized in three categories: elementary schools, middle school, and high school.

Elementary Schools

The district's four elementary schools are generally appropriately sized and configured to support ongoing K-4 operations. However, long-term needs were identified at each of the schools relative to items such as maintenance needs and refreshing educational spaces to support the district's modern educational program. These potential projects, as listed below, may be implemented over time in line with the school district's priorities and future capital project budget allocations.

1. District-Wide Elementary Maintenance Upgrades – Building systems and interior upgrades at each of the four existing elementary schools.
2. Waverly Elementary School Addition/Renovation – A more comprehensive renovation and modest addition is presented for the district's consideration at Waverly due to an identified need for more operational spaces.

Middle School

As detailed in previous sections of this report, Abington Heights Middle School represents the district's most significant capital project need due to an inefficient building configuration, inherent significant ADA compliance issues, safety concerns relative to fire danger, and layout and makeup of educational spaces. The following project options are presented for the district's consideration:

1. Full renovation of the existing building and limited classroom addition.
2. Construction of a new academic wing addition, demolition of the existing half-circle portion, renovation of the remaining existing structure.
3. Construction of a complete new middle school and demolition of the existing building.

Abington Heights School District Construction Options Introduction

High School

The existing high school is generally suited to serve the district's long-term needs. Deficiencies were identified relative to the layout and makeup of select educational spaces as well as general maintenance needs. The following represent upgrade options that can be implemented at the district's discretion to better support daily operations and emerging instructional practices.

1. An interior renovation/reconfiguration of the library and family consumer science rooms.
2. The interior renovation from #1 combined with a building-wide systems and interior upgrade.
3. An addition housing new STEM labs addressing a need for more educational program space; this could be implemented along with #1 or #2 or as a stand-alone future project.

Each of the capital project options described above is detailed in the following pages via a narrative that includes a summary description of the work and preliminary implementation schedule, preliminary project cost estimate (either a range is presented or a full budget estimate is provided depending on the type of project), and conceptual sketches (where developed) to convey project scope.

Abington Heights School District Elementary Schools Option 1: District-Wide Elementary Upgrades

Overview:

As outlined in sections 4, 5, and 6 of this report, while each of the existing elementary schools are generally supportive of the district’s K-4 program, needs are present at each facility related to items such as general maintenance, building and system lifecycle issues, ADA and security upgrades, and interior conditions.

Proposed Project:

In line with the district’s priorities and budget allocations, renovation projects could be implemented concurrently, overlapping, or sequentially one at a time. As the conditions and needs vary from building to building, the exact scope of each project will vary but generally include building envelope and roof repairs/replacement; enhanced insulation and building performance; modernization of mechanical, electrical, plumbing, and data systems including incorporation of air conditioning; achievement of ADA compliance; safety and security upgrades; modernization of classrooms and educational environments; and general refresh of the building interior.

Implementation Plan:

The schedule will vary per the scope of each project but in general design and approvals would run over the course of 8– 12 months. Construction would be implemented in phases over two summers and one school year. Total duration for each project of 24 – 30 months.

Project Budget Planning

The cost of projects will vary in accordance with the specific needs to be addressed and the district’s priorities. The following represents a range of total project cost to be used in budget planning based on the current size and condition of each school. These figures are based on 2023 market conditions.

SCHOOL	LOW RANGE	HIGH RANGE
Clarks Summit	\$15,300,000	\$24,500,000
Newton-Ransom	\$5,700,000	\$9,200,000
South Abington	\$5,900,000	\$9,500,000
Waverly	\$6,200,000	\$10,000,000

Abington Heights School District Elementary Schools Option 2: Waverly Elementary School

Waverly Addition/Renovation

Overview:

This option offers a more sweeping project at Waverly as opposed to the maintenance project from Option 1 to resolve operational space needs identified during the course of this study. The original segment was built in 1926 and additional multi-purpose, administration, and classroom spaces were added in 1994. Most of the building has not had any work since the 1994 addition and renovation project.

The building is not air conditioned, does not provide ADA compliant plumbing fixtures, and has building systems that are nearing the end of their functional life. The finishes (flooring, etc.) are also in poor condition. Currently, the building's entry does not connect with the remotely located main office creating a potential security concern.

An addition would allow for the relocation of the administration suite to create a secure entry for the school. With this move of administration, the existing administration area would be opened for educational use.

Proposed Project:

Addition Scope – A one-story addition would be constructed at the current entry of the building. The addition would be approximately 2,000 square feet and house the administration offices, nurse's suite, and small pull-out spaces that the building does not currently have.

Renovation Scope – With the relocation of administration, the Library and STEM classrooms on the second floor would move to the front of the building where administration is currently housed. The remainder of the school is then renovated in phases.

Implementation Plan:

Planning, design, and approvals would run over the course of 12 months. Construction would be implemented in phases over 24 months with the addition built first, then opened and utilized as swing space as the balance of the building is renovated. Total project duration of 36 months.

Construction Item	Square Footage	\$ / sq. ft.	Cost	Remarks
New Construction (Front Entry)	6,500	\$400	\$2,600,000	Secure Entry
Existing Renovation:				
General Construction (High Reno)	10,000	\$125	\$1,250,000	New Layout
General Construction (Light Reno)	30,000	\$85	\$2,550,000	Finishes
Mechanical Construction	40,000	\$50	\$2,000,000	New HVAC w/ AC
Electric Construction	40,000	\$40	\$1,600,000	Imprv. Elec+Wifi
Plumbing Construction	40,000	\$18	\$720,000	ADA Fixtures
Fire Supression	40,000	\$12	\$0	Not Included
Code Compliance Allowance	Allowance		\$100,000	Additional Issues
		Sub Total	\$10,820,000	
Design/Bidding Contingency	5%		\$541,000	
		Total Construction Cost	\$11,361,000	
Construction Contingency	10%		\$1,136,100	
		Sub Total	\$12,497,100	
Soft Costs				
(Permits, Testing, Insurance, Clerk of the Works, Fees, Financing, etc.)	13%		\$1,476,930	
Furniture, Furnishing & Equipment	310	\$1,500	\$465,000	Per Student Allow.
TOTAL PROJECT COST			\$14,439,030	

AHMS Full Renovation and Classroom Addition

Overview:

The existing middle school has significant needs associated with the makeup of learning spaces, fire hazard concerns, ADA incompliance, operational inefficiency, and general maintenance. This option addresses the issues via a full building renovation.

The renovation project is implemented to convert the existing classrooms in the half-circle pod portion into enclosed appropriately dimensioned rooms, upgrade interior environments in the core spaces (gym, cafeteria, auditorium, etc.), and renovate building systems and infrastructure.

As the conversion of the half-circle portion will yield a net reduction in classrooms due to the constraints of the existing configuration, an addition housing classrooms and other support space is required as part of this project.

Proposed Project:

Addition Scope – A two-story addition would provide additional classroom space that will be lost when the pods are converted to full-sized, enclosed classrooms. This addition will house full-sized classrooms as well as small group instruction space, instructional planning rooms, and special education rooms. The addition will need to include an elevator for ADA accessibility.

Renovation Scope – The current pods (two floors) would undergo a full renovation to accommodate full-sized classrooms with full height walls. Then, a renovation of the remainder of the building would be completed in phases to upgrade the mechanical systems and finishes. Upgrading all plumbing fixtures should also be a priority to meet ADA compliance.

Implementation Plan:

Planning, design, and approvals would run over the course of 12 months. Construction would be implemented in phases over 28 months with the addition built first, then opened and utilized as swing space as the balance of the building is renovated. Total project duration of 40 months.

Construction Item	Square Footage	\$ / sq. ft.	Cost	Remarks
New Construction (Classrooms)	20,000	\$385	\$7,700,000	
Existing Renovation:				
General Construction (High Reno)	75,200	\$125	\$9,400,000	New Layout
General Construction (Light Reno)	67,000	\$85	\$5,695,000	Finishes
Mechanical Construction	142,200	\$50	\$7,110,000	New HVAC w/ AC
Electric Construction	142,200	\$40	\$5,688,000	Imprv. Elec+Wifi
Plumbing Construction	142,200	\$18	\$2,559,600	ADA Fixtures
Fire Supression	142,200	\$12	\$0	Not Included
Code Compliance Allowance	Allowance		\$100,000	Additional Issues
		Sub Total	\$38,252,600	
Design/Bidding Contingency	5%		\$1,912,630	
		Total Construction Cost	\$40,165,230	
Construction Contingency	10%		\$4,016,523	
		Sub Total	\$44,181,753	
Soft Costs				
(Permits, Testing, Insurance, Clerk of the Works, Fees, Financing, etc.)	16%		\$6,426,437	
TOTAL PROJECT COST			\$50,608,190	

Abington Heights School District Middle Schools Option 2: AHMS Renovation/Reconstruction

AHMS Renovation/Reconstruction

Overview:

This option encompasses a larger addition than Option 1, enabling demolition of the existing half-circle pod portion at the conclusion of the project. Renovation of the remaining segment of the existing building would be undertaken to upgrade interior environments and renovate building systems and infrastructure.

The core spaces in the building (the gym, cafeteria, auditorium, etc.) are in fair condition and service the student population as intended. The addition would be built off the south face of the building where the front entry is currently located. The addition would be two-stories, with a 5th/6th grade wing and a 7th/8th grade wing. A courtyard would connect the two wings.

Proposed Project:

Addition Scope – The two-story addition would be constructed at the current entry of the building. The addition would house approximately 65 classrooms to replace the existing academic portion of the building. The library would be relocated within the addition as well. A new administration and nurse's suite would be built at the new front entry.

Renovation Scope – A renovation of the remainder of the existing building should be completed in phases to upgrade the mechanical systems and finishes. Upgrading all plumbing fixtures should also be a priority to meet ADA compliance. The half-circle pod portion of the building would be demolished. A new gymnasium would be constructed as an addition in this area when demolition is completed.

Implementation Plan:

Planning, design, and approvals would run over the course of 12 months. Construction would be implemented in phases over 24 months with the addition built first, then opened and utilized as swing space as the balance of the building is renovated. Total project duration of 36 months.

Construction Item	Square Footage	\$ / sq. ft.	Cost	Remarks
New Construction	165,000	\$375	\$61,875,000	
Demolition of Existing	75,200	\$8	\$601,600	Demo Half-Circle
Existing Renovation:				
General Construction (High Reno)	10,000	\$125	\$1,250,000	
General Construction (Light Reno)	57,000	\$85	\$4,845,000	Finishes
Mechanical Construction	67,000	\$50	\$3,350,000	New HVAC w/ AC
Electric Construction	67,000	\$40	\$2,680,000	Imprv. Elec+ Wifi
Plumbing Construction	67,000	\$18	\$1,206,000	ADA Fixtures
Fire Supression	67,000	\$12	\$0	Not Included
Code Compliance Allowance	Allowance		\$100,000	Additional Issues
		Sub Total	\$75,907,600	
Design/Bidding Contingency	5%		\$3,795,380	
		Total Construction Cost	\$79,702,980	
Construction Contingency	10%		\$7,970,298	
		Sub Total	\$87,673,278	
Soft Costs				
(Permits, Testing, Insurance, Clerk of the Works, Fees, Financing, etc.)	16%		\$12,752,477	
TOTAL PROJECT COST			\$100,425,755	

Abington Heights School District Middle School Option 3: AHMS New Building

AHMS New Building

Overview:

This option addresses all needs at the Middle School without complicated phasing and renovation work. With this option, a completely new school would be constructed and the existing building demolished.

Proposed Project:

The new building would be constructed to the west of the current building at the open area of the site. The building would include two gyms, a fitness center, a cafeteria and kitchen, and a multipurpose auditorium. Administration, guidance, and support rooms would be interspersed throughout the space, with the main office at the front door linked to a secure entry vestibule. The two-story academic wings would house the four grades of the middle school as well as additional academic and learning support spaces. Specialty spaces like STEM, library, science, music, and art would all have their own dedicated areas and be adjacent to the primary education areas.

The car and bus lanes would be constructed to have separate entries onto the site. After the new building is opened, the existing building would be demolished. New fields for athletics would be constructed in its place.

Implementation Plan:

Planning, design, and approvals would run over the course of 12 months. Construction would be implemented over 24 months with demolition and site restoration to follow. Total project duration of 36 months.

New Construction

Construction Item	Square Footage	\$ / sq. ft.	Cost	Remarks
New Construction	221,000	\$375	\$82,875,000	
Demolition of Existing School	142,200	\$8	\$1,137,600	
		Sub Total	\$84,012,600	
Design/Bidding Contingency	5%		\$4,200,630	
		Total Construction Cost	\$88,213,230	
Construction Contingency	5%		\$4,410,662	
		Sub Total	\$92,623,892	
Soft Costs				
(Permits, Testing, Insurance, Clerk of the Works, Fees, Financing, etc.)	16%		\$14,114,117	
TOTAL PROJECT COST			\$106,738,008	

Abington Heights School District High School Option 1: AHHS Library and FCS Reconfiguration

AHHS Library and FCS Reconfiguration

Overview:

This option is focused on addressing the need for more collaborative, flexible, project-based learning environments within the high school.

The current family consumer science room and the library are underutilized and do not contain equipment for full operability.

A renovation would create a new welcoming aesthetic at the front of the building, more flexible support spaces, and a large student commons.

Proposed Project:

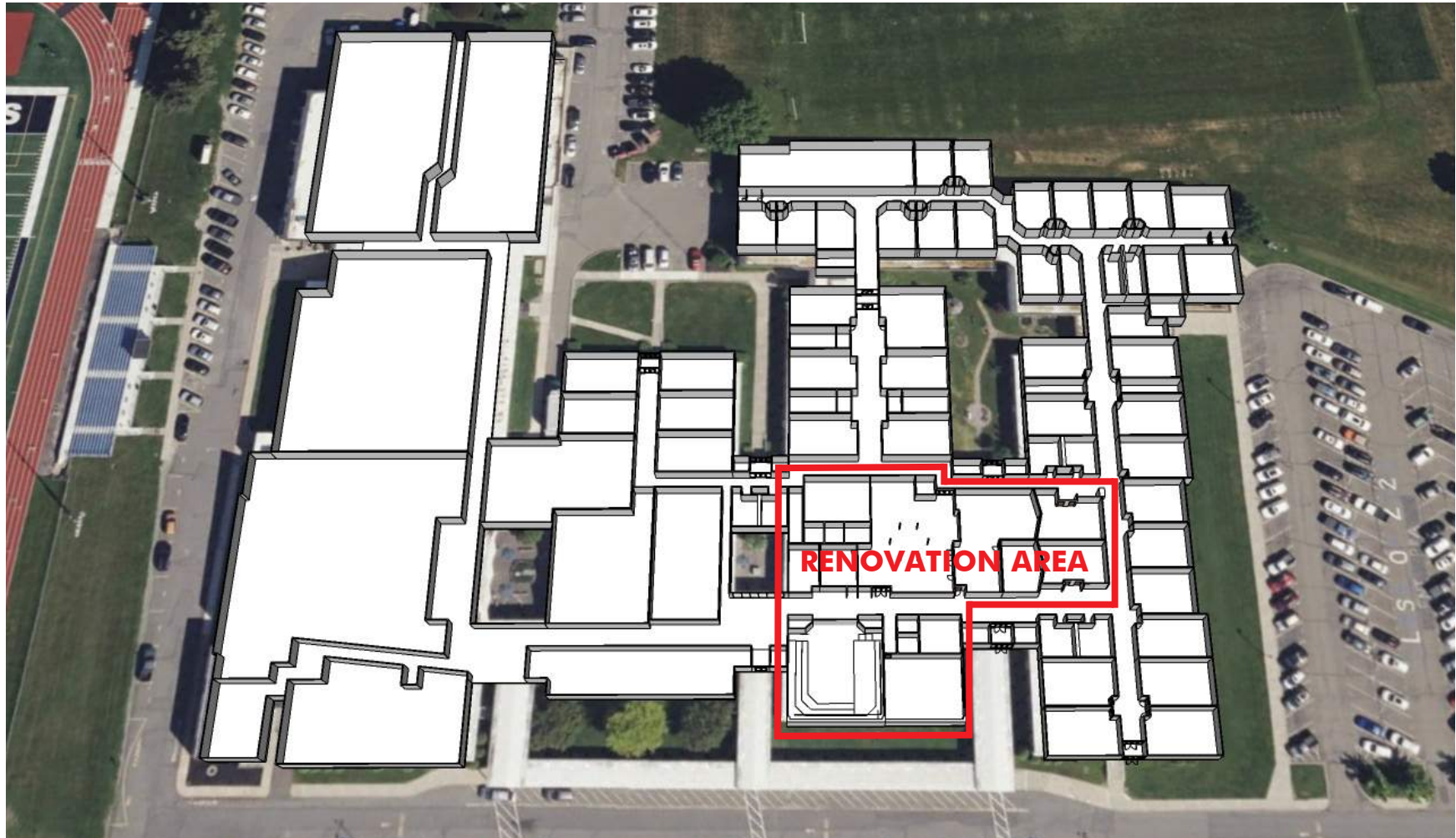
Working within the existing structure of the building, the library would be renovated and reconfigured to serve as an active collaboration space. A small area for library stacks would remain. A classroom would be accommodated within the library for instruction. The current FCS room would become an open student commons with an active learning stair, TV monitors, and flexible furniture for large group instruction and activities. A STEM lab would be constructed adjacent to the student commons. A zone at the end of the corridor would be dedicated for small group instruction rooms and faculty planning areas.

Implementation Plan:

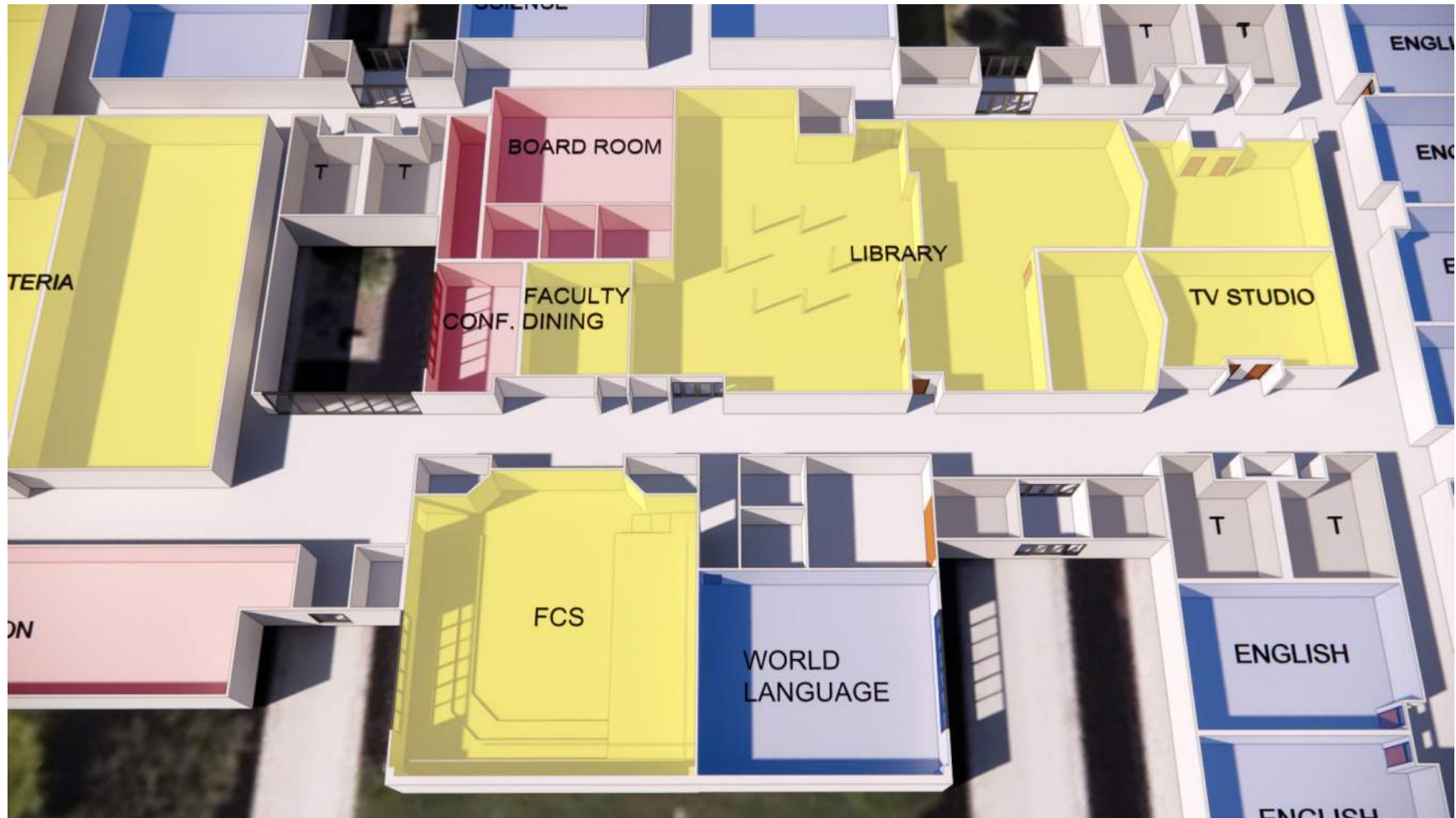
Planning, design, and approvals would run over the course of 12 months. Construction would be implemented in phases over two summers and one school year (approximately 14 months). Total project duration of 26 months.

Construction Item	Square Footage	\$ / sq. ft.	Cost	Remarks
General Construction	20,000	\$110	\$2,200,000	
Mechanical Construction	20,000	\$50	\$1,000,000	New HVAC
Electric Construction	20,000	\$45	\$900,000	Imprv. Elec+Wifi
Plumbing Construction	20,000	\$2	\$40,000	ADA Fixtures
Fire Supression	20,000	\$13	\$260,000	As Required
Code Compliance Allowance	Allowance		\$100,000	Additional Issues
		Sub Total	\$4,500,000	
Design/Bidding Contingency	5%		\$225,000	
		Total Construction Cost	\$4,725,000	
Construction Contingency	5%		\$236,250	
		Sub Total	\$4,961,250	
Soft Costs				
(Permits, Testing, Insurance, Clerk of the Works, Fees, Financing, etc.)	12%		\$567,000	
Furniture, Furnishing & Equipment	Allowance		\$250,000	
TOTAL PROJECT COST			\$5,778,250	

EXISTING HIGH SCHOOL PLAN



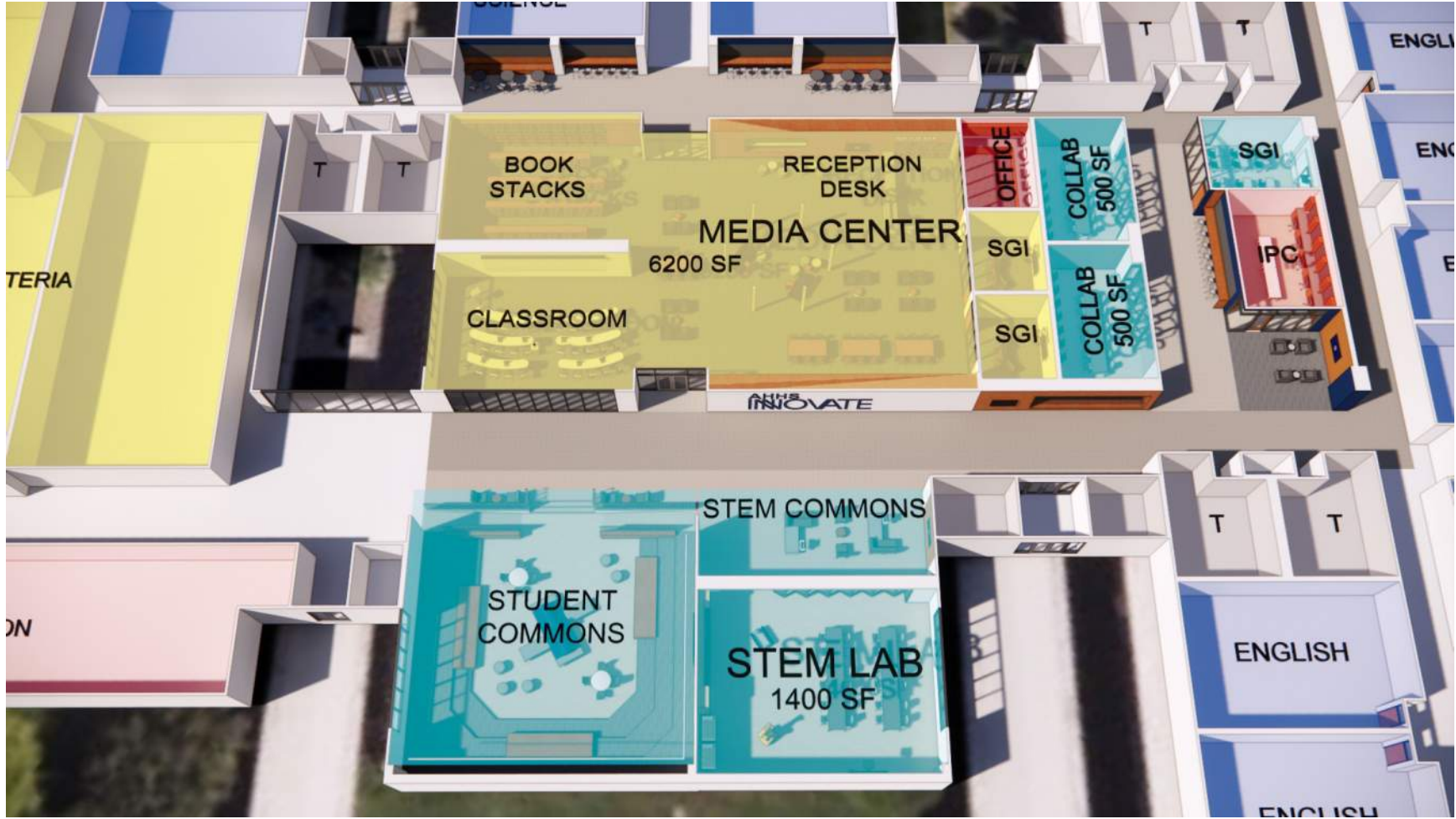
EXISTING BUILDING PLAN







LEGEND

- Commons
- Administration
- Classrooms

AHHS OPTION 1 PRELIMINARY DESIGN CONCEPT
PROPOSED RECONFIGURED BUILDING PLAN



LEGEND	
	Commons
	Administration
	Classrooms
	Collaboration

AHHS OPTION 1 PRELIMINARY DESIGN CONCEPT
RENDERING OF PROPOSED NEW STUDENT COMMONS



AHHS OPTION 1 PRELIMINARY DESIGN CONCEPT
RENDERING OF PROPOSED NEW STUDENT COMMONS



Scan QR code for
interactive view



AHHS OPTION 1 PRELIMINARY DESIGN CONCEPT
RENDERING OF PROPOSED NEW STUDENT COMMONS



Scan QR code for
interactive view



RENDERING LOOKING INTO PROPOSED NEW INSTRUCTIONAL PLANNING CENTER



AHHS OPTION 1 PRELIMINARY DESIGN CONCEPT
RENDERING OF PROPOSED RENOVATED MEDIA CENTER



Scan QR code for
interactive view



AHHS OPTION 1 PRELIMINARY DESIGN CONCEPT
RENDERING OF PROPOSED RENOVATED MEDIA CENTER



AHHS Library/FCS Reconfiguration with Full Building Renovation

Overview:

This option encompasses the same library/FCS area reconfiguration as AHHS Option 1 but also includes a full building-wide renovation and upgrade.

Proposed Project:

In addition to the AHHS Option 1 work, the remainder of the building would be renovated in kind. In general this will entail building envelope and roof upgrades; enhanced insulation and building performance; modernization of mechanical, electrical, plumbing, and data systems; achievement of ADA compliance; safety and security upgrades; modernization of classrooms and educational environments; and general refresh of the building interior.

Implementation Plan:

Planning, design, and approvals would run over the course of 12 months. Construction would be implemented in phases over three summers and two school years (approximately 26 months). Total project duration of 38 months.

Construction Item	Square Footage	\$ / sq. ft.	Cost	Remarks
Existing Renovation:				
General Construction (High Reno)	20,000	\$220	\$4,400,000	Library STEM
General Construction (Light Reno)	180,100	\$85	\$15,308,500	Finishes
Mechanical Construction	200,100	\$50	\$10,005,000	New HVAC w/ AC
Electric Construction	200,100	\$40	\$8,004,000	Imprv. Elec+Wifi
Plumbing Construction	200,100	\$18	\$3,601,800	ADA Fixtures
Fire Supression	200,100	\$12	\$0	Not Included
Code Compliance Allowance	Allowance		\$100,000	Additional Issues
		Sub Total	\$41,419,300	
Design/Bidding Contingency	5%		\$2,070,965	
		Total Construction Cost	\$43,490,265	
Construction Contingency	10%		\$4,349,027	
		Sub Total	\$47,839,292	
Soft Costs				
(Permits, Testing, Insurance, Clerk of the Works, Fees, Financing, etc.)	16%		\$6,958,442	
Furniture, Furnishing & Equipment	1,295	\$2,000	\$2,590,000	Per Student Allow.
TOTAL PROJECT COST			\$57,387,734	

Abington Heights School District High School Option 3: STEM Wing Addition

New STEM Wing Addition

Overview:

This option addresses a need for modernized classrooms as well as additional space for state-of-the-art STEM labs.

Proposed Project:

A two-story addition would be constructed to connect the 1997 addition to the Tech/Shop classroom wing. This would create an enclosed courtyard that could be used for learning purposes. The program of spaces in the addition can be tailored to the district's needs but is envisioned to contain a mix of labs, project rooms, and meeting rooms to accommodate collaborative learning activities in a range of disciplines.

Implementation Plan:

Planning, design, and approvals would run over the course of 12 months. Construction would occur over two summers and one school year. Total project duration of 26 months.

Construction Item	Square Footage	\$ / sq. ft.	Cost	Remarks
New Construction (STEM Labs)	20,000	\$425	\$8,500,000	Addition
Existing Renovation:				
General Construction (High Reno)	2,000	\$200	\$400,000	Link to Addition
Code Compliance Allowance	Allowance		\$100,000	Additional Issues
		Sub Total	\$9,000,000	
Design/Bidding Contingency	5%		\$450,000	
		Total Construction Cost	\$9,450,000	
Construction Contingency	10%		\$945,000	
		Sub Total	\$10,395,000	
Soft Costs				
(Permits, Testing, Insurance, Clerk of the Works, Fees, Financing, etc.)	16%		\$1,512,000	
Furniture, Furnishing & Equipment	Allowance		\$500,000	
TOTAL PROJECT COST			\$12,407,000	

