

FACILITIES FOR THE FUTURE



NORTH ALLEGHENY SCHOOL DISTRICT
INVESTMENT GRADE AUDIT
BOARD PRESENTATION 09/09/2026



SCHRADERGROUP
A HORD COPLAN MACHT STUDIO



GOAL #4: FACILITIES FOR THE FUTURE



GOALS

1 ACADEMIC EXCELLENCE

Ignite academic success, exceeding regional and national standards by combining innovative teaching methods and rigorous curricula that challenges students to stretch their potential.

2 CONTINUOUS LEARNING

Commitment to relevant, enriching staff development that fosters a culture of excellence for all.

3 EMPOWERING STUDENTS

Promote a school environment where students feel connected and their voices are encouraged, heard, and valued.

4 FACILITIES for the FUTURE

Invest in the maintenance and development of facilities and grounds that create future-ready learning spaces, reflecting our community pride and dedication to excellence in academics, arts, athletics and activities.

5 SAFETY & WELLNESS

Cultivate a safe educational environment where all students, staff and families feel secure, welcomed, and respected.





ELEMENTARY SCHOOLS | *Facilities for the Future*

An investment in facilities today ensures every student benefits from a **safe, welcoming, high-quality learning environment—today and for years to come.**

YEARS SINCE LAST MAJOR RENOVATION

➤ Ingomar Elementary	27 YEARS
➤ Hosack Elementary	27 YEARS
➤ Peebles Elementary	27 YEARS
➤ Bradford Woods Elementary	9 YEARS
➤ Marshall Elementary	9 YEARS
➤ Franklin Elementary	5 YEARS
➤ McKnight Elementary	5 YEARS



OUR COMMITMENT

We are committed to helping the District enhance its elementary schools and provide a strong foundation for every student to learn, grow, and succeed.

STRONG SCHOOLS. **BRIGHT FUTURES.**

AGING HVAC INFRASTRUCTURE

Major equipment has reached or exceeded typical service life

INGOMAR ELEMENTARY



1999

Major HVAC systems installed



4-Pipe Classroom
Unit Ventilators (UVs)

Past Median Life



Boilers

Approaching
Typical Life



Chillers

Past Median Life



Pumps

Past Median Life



Air Handling Units (AHUs)

Past Median Life

HOSACK ELEMENTARY



1999

Major HVAC systems installed



4-Pipe Classroom
Unit Ventilators (UVs)

Installed in 2023



Boilers

Approaching
Typical Life



Chillers

Past Median Life



Pumps

Past Median Life



Air Handling Units (AHUs)

Past Median Life

PEEBLES ELEMENTARY



1999

Major HVAC systems installed



4-Pipe Classroom
Unit Ventilators (UVs)

Installed in 2024



Boilers

Approaching
Typical Life



Chillers

Past Median Life



Pumps

Past Median Life



Air Handling Units (AHUs)

Past Median Life



Project modernizes major systems across all three schools.



25+ YEARS IN SERVICE

Much of the original HVAC infrastructure has already exceeded ASHRAE's typical median service life, increasing the risk of system failures, higher operating costs, and reduced performance.

Equipment age based on District facility information. Expected service life based on ASHRAE equipment life expectancy data.

How Better HVAC Supports Student Learning

Research links better ventilation, temperature control, and indoor air quality to stronger student outcomes.



Higher Test Scores & Academic Gains

A 2024 Brown University study of public K–12 schools across New York State found that improvements in HVAC system conditions reduced absences and suspensions while modestly improving math and reading scores.

EPA research also shows that students in better-ventilated classrooms tend to achieve higher math and reading scores than students in poorly ventilated classrooms.



Better Performance When Classrooms Are Cooler

Research of 75,000 public high school students found they were **12.3% more likely to fail an exam** on a 90°F day than on a 75°F day. Improved ventilation and temperature control help keep students comfortable, alert, and ready to learn.



Better Focus, Healthier Classrooms & Higher Attendance

Research links good ventilation and temperature control to better concentration, fewer respiratory symptoms, and healthier classrooms.

EPA studies also associate better **school conditions** with improved attendance and student performance.



Key Takeaway

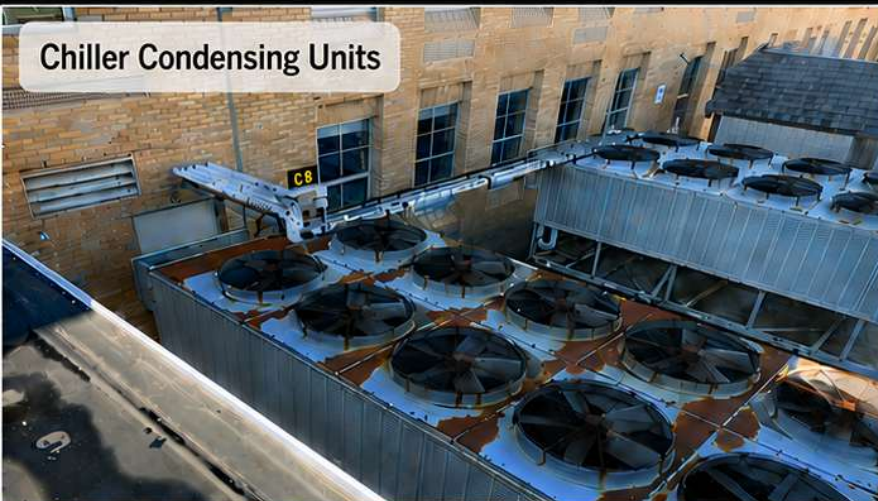
Upgrading aging HVAC systems is more than a facilities investment. It helps create healthier, more comfortable classrooms and supports the learning conditions students need to focus, attend, and succeed.



Sources: Brown University Annenberg Institute for School Reform (2024); U.S. EPA “The Impact of School Indoor Environments on Student Performance” (2015); Harvard T.H. Chan School of Public Health (2022)

INGOMAR ELEMENTARY SCHOOL

Chiller Condensing Units



Chiller
(R22 Refrigerant)



Boiler



Admin PTAC unit



Classroom UV and Casework



Existing Conditions & Proposed Scope of Work

Ingomar Elementary School

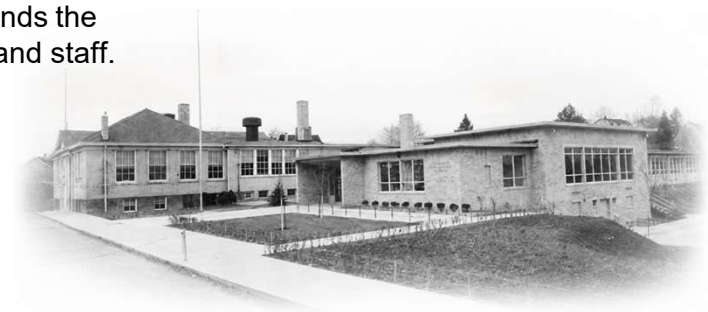
McClure's proposed improvements for Ingomar Elementary support the District's Facilities for the Future initiative by modernizing aging building systems while providing the mechanical, electrical, and life safety infrastructure required for the planned building additions. Our Investment Grade Audit (IGA) focused on improving system reliability, increasing energy efficiency, enhancing indoor air quality and ventilation, upgrading building-wide lighting and reducing long-term operating and maintenance costs.

The proposed scope of work includes replacement of aging classroom HVAC equipment, modernization of the central plants and building automation system, building-wide replacement of existing interior lighting with new high-efficiency LED fixtures, and installation of new mechanical, electrical, and life safety systems serving the additions. These improvements will establish modern building systems consistent with the District's recently renovated elementary schools, providing improved temperature control, ventilation, indoor air quality, lighting quality, and occupant comfort while creating a more reliable and maintainable facility.

Collectively, the proposed ECMs provide a coordinated long-term modernization strategy that extends the useful life of the building and creates a healthier, more efficient learning environment for students and staff.

Project Focus

- Classroom HVAC equipment replacement
- Heating and cooling plant modernization
- Mechanical and electrical upgrades supporting the building additions
- Building automation system (BAS) upgrades
- Building-wide LED lighting upgrades
- Improved energy efficiency, system reliability, and occupant comfort



INGOMAR ELEMENTARY SCHOOL – SCOPE OF IMPROVEMENTS

EXISTING CONDITIONS & PROPOSED SCOPE OF WORK

Modernize existing mechanical and electrical systems throughout the school while providing completely new building systems for the planned additions and renovated spaces. Work includes HVAC and central plant improvements, building controls, lighting, power, life safety, and technology infrastructure.

MECHANICAL

EXISTING BUILDING

- Replace 34 classroom 4-pipe UVs and controls
- Replace one boiler and associated primary circulation pump
- Replace chilled-water plant with two air-cooled chillers, pumps, accessories, and controls
- Replace one AHU and six packaged terminal air conditioners (PTACs)
- Upgrade BAS and integrate new and existing-to-remain (ETR) equipment
- Demo and replace approximately 91 grilles, registers, and diffusers (GRDs) associated with ETR equipment
- Ductwork and coil cleaning following completion of construction activities
- Extended warranties on new mechanical equipment (includes additions)

BUILDING ADDITIONS

- Provide complete HVAC systems for the Large Group Instruction (LGI), office addition, swing classroom, and support spaces
- Install new multi-zone AHU and roof-top units (RTUs) with associated variable-air-volume (VAV) terminal units
- Provide new mini-split systems (MSS), exhaust systems, ductwork, piping, controls, and GRDs.
- Integrate all new HVAC equipment into the building automation system

ELECTRICAL

EXISTING BUILDING

- Replace interior lighting with high-efficiency LED fixtures
- Electrical modifications for new HVAC equipment
- Replace existing fire alarm system with new addressable voice system
- Replace approximately 800 Linear Feet (LF) of classroom surface raceway
- Electrical Power System Study and distribution-equipment cleaning
- Replace surge protection device and card-access system additions

BUILDING ADDITIONS

- Provide required electrical infrastructure to support new HVAC equipment and mechanical system upgrades
- Provide power, lighting, controls, data, fire alarm, and associated low-voltage systems
- Install new receptacles, floor boxes, and data outlets with cabling
- Provide new site lighting and temporary power for construction trailers
- Provide power and supporting infrastructure for new card-access devices

INGOMAR ELEMENTARY SCHOOL

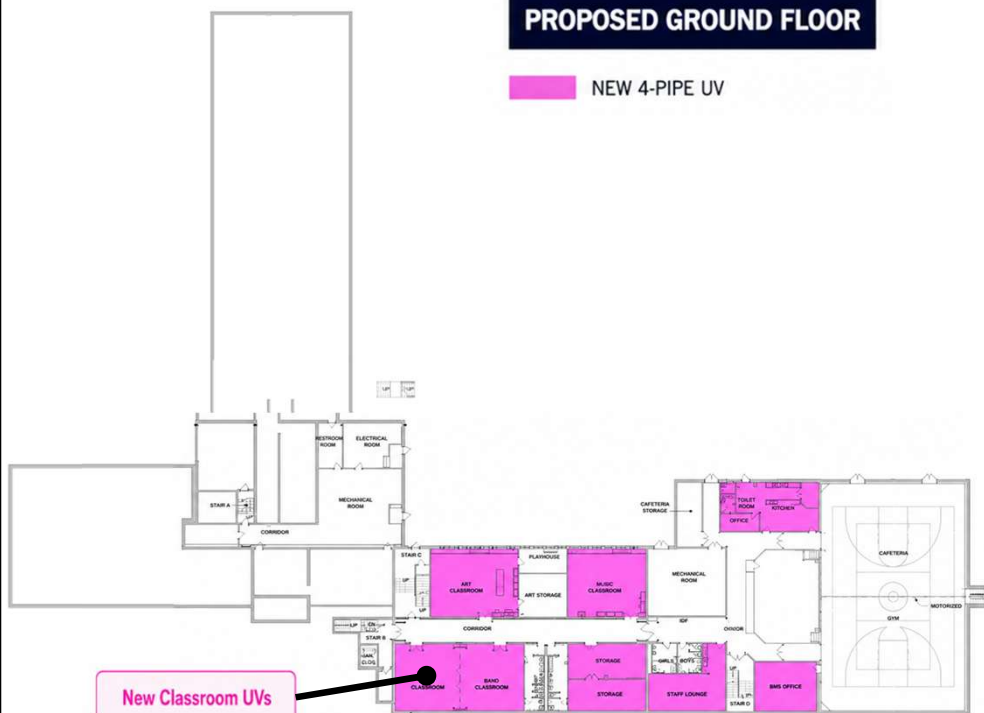
EXISTING GROUND FLOOR

EXISTING 4-PIPE UV



PROPOSED GROUND FLOOR

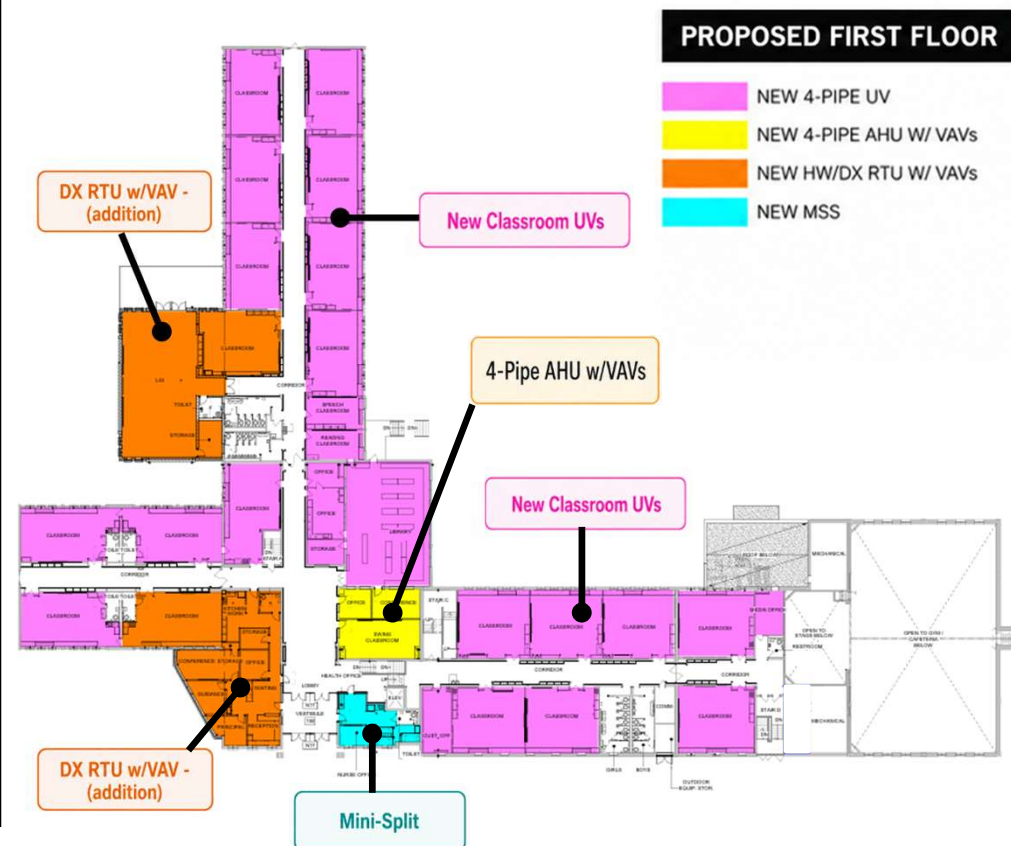
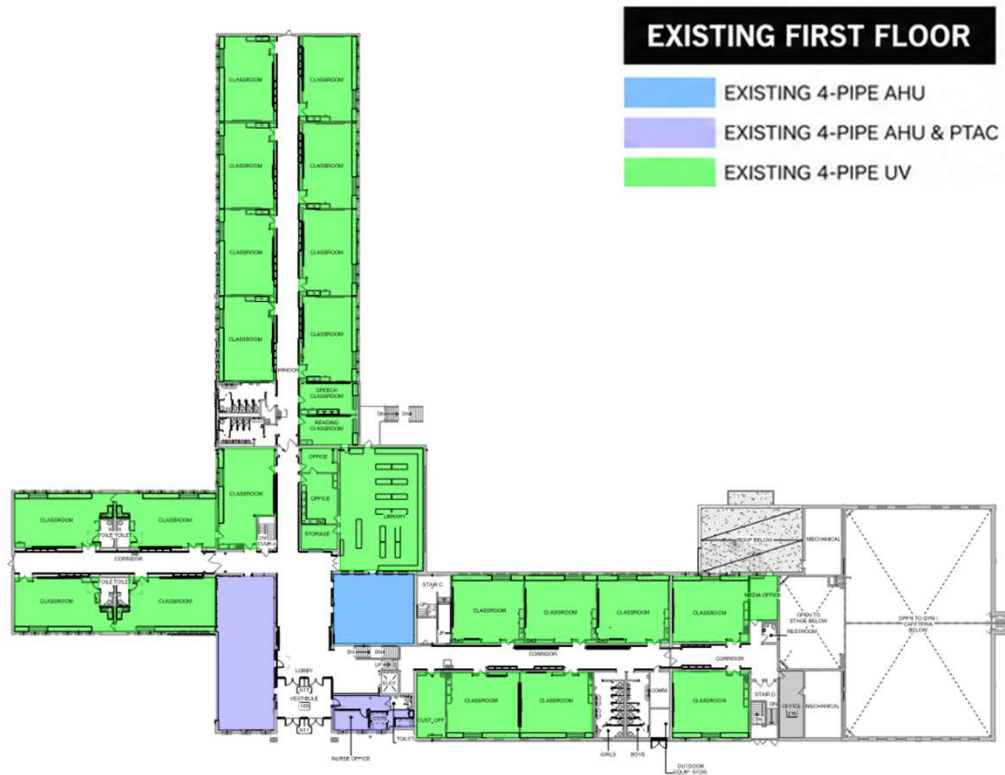
NEW 4-PIPE UV



New Classroom UVs

INGOMAR ELEMENTARY SCHOOL

FIRST FLOOR HVAC PLAN COMPARISON



HOSACK ELEMENTARY SCHOOL

Chiller Condensing Units



Boilers



Main Lobby (LED Lighting Upgrade)



Chiller
(R22 Refrigerant)



Chiller Condensing Unit



Existing Conditions & Proposed Scope of Work

Hosack Elementary School

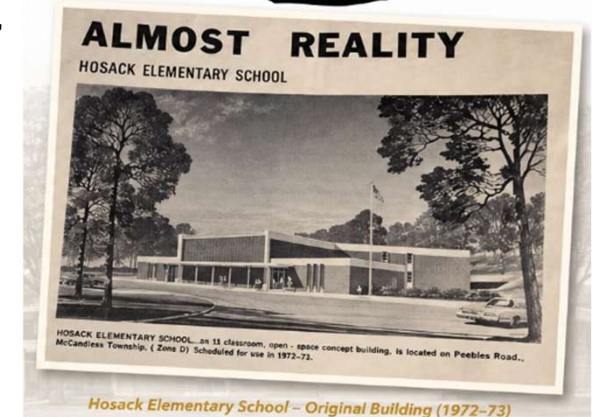
McClure's proposed improvements for Hosack Elementary School support the District's *Facilities for the Future* initiative by completing the modernization of the building's remaining mechanical infrastructure while providing the systems necessary to support the planned building additions. The Investment Grade Audit (IGA) focused on renewing the central heating and cooling plants, improving controls integration, increasing energy efficiency, and reducing long-term operating and maintenance costs.

The proposed scope of work includes modernization of the central heating and cooling plants, upgrades to the building automation system, building-wide replacement of existing interior and exterior lighting with new high-efficiency LED fixtures, and installation of new mechanical and electrical systems serving the planned additions. These improvements will establish modern building systems consistent with the District's recently renovated elementary schools, improving temperature control, ventilation, indoor air quality, lighting quality, occupant comfort, and overall system reliability.

Collectively, these ECMs complete a coordinated long-term investment in Hosack Elementary School's HVAC infrastructure, positioning the facility to provide reliable, energy-efficient operation for decades while supporting a healthy and comfortable learning environment.

Project Focus

- Heating and cooling plant modernization
- Mechanical and electrical upgrades supporting the building additions
- Building automation system (BAS) upgrades
- Building-wide LED lighting upgrades
- Improved energy efficiency, system reliability, and occupant comfort



Hosack Elementary School -- Original Building (1972-73)

HOSACK ELEMENTARY SCHOOL – SCOPE OF IMPROVEMENTS

EXISTING CONDITIONS & PROPOSED SCOPE OF WORK

Modernize existing mechanical and electrical systems throughout the school while providing completely new building systems for the planned additions and renovated spaces. Work includes HVAC and central plant improvements, building controls, lighting, power, life safety, and technology infrastructure.

MECHANICAL

EXISTING BUILDING

- Replace one existing boiler and associated primary circulation pump
- Replace chilled-water plant with two air-cooled chillers, pumps, accessories, and controls
- Upgrade the BAS and integrate all new mechanical equipment into the existing FX-80 supervisory controller
- Demo and replace approximately 136 GRDs associated with ETR equipment
- Ductwork and coil cleaning following completion of construction activities
- Extended warranties on new mechanical equipment (includes additions)

BUILDING ADDITIONS

- Provide complete HVAC systems for the LGI, office addition, Volunteer Room and renovated spaces
- Provide new Hot Water/Direct Expansion (HW/DX) RTU, HW/DX multi-zone VAV RTU, and split AHU system
- Provide new VAV terminal units, a Tall Vertical UV for a 5th Grade Class, a fan-coil unit, mini-split, ductwork, piping, controls, and GRDs
- Integrate all new equipment into the building BAS

ELECTRICAL

EXISTING BUILDING

- Replace interior and exterior lighting with high-efficiency LED fixtures
- Electrical modifications for new HVAC equipment
- Relocate approximately 28 receptacles and 14 data outlets affected by new casework
- Replace approximately 600 LF of classroom surface raceway
- Perform electrical system studies and clean existing distribution equipment
- Replace surge protection device and card-access system additions

BUILDING ADDITIONS

- Provide required electrical infrastructure to support new HVAC equipment and mechanical system upgrades
- Provide power, lighting, controls, data, fire alarm, and associated low-voltage systems
- Install new receptacles, floor boxes, and data outlets with cabling
- Provide new site lighting and temporary power for construction trailers
- Provide power and supporting infrastructure for new card-access devices

HOSACK ELEMENTARY SCHOOL

FIRST FLOOR HVAC PLAN COMPARISON

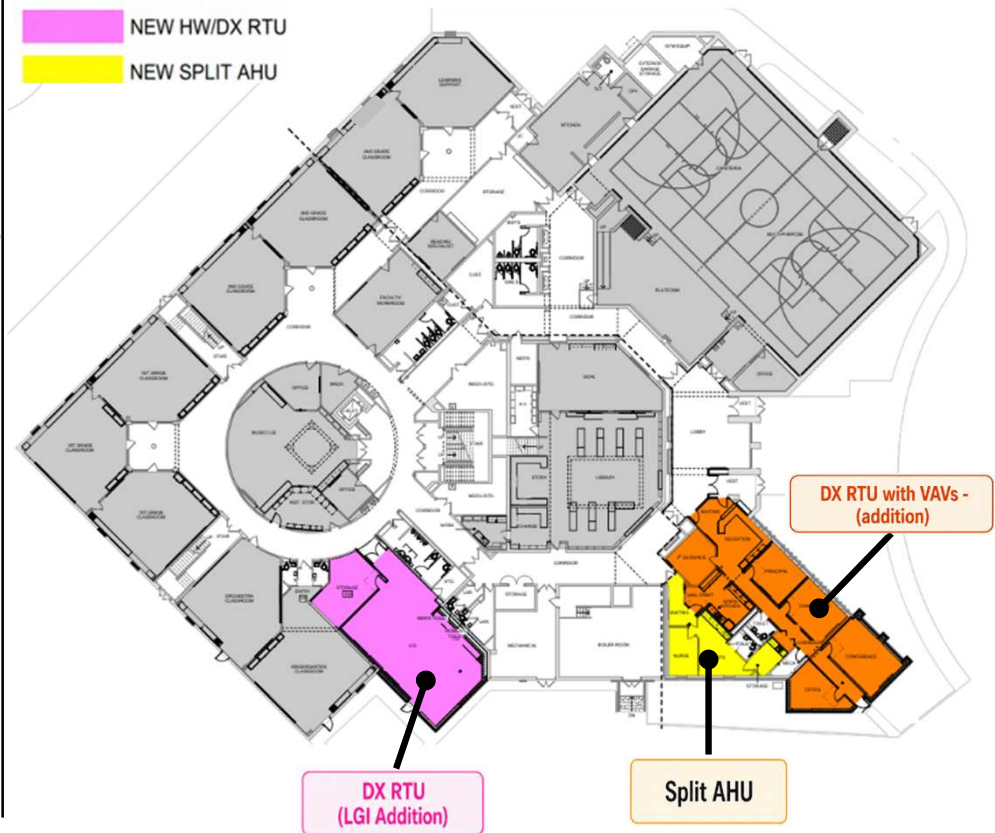
EXISTING FIRST FLOOR

- ETR 4-PIPE UV/BCU/AHU
- EXISTING 4-PIPE AHU
- EXISTING SPLIT AHU
- EXISTING 4-PIPE UV



PROPOSED FIRST FLOOR

- NEW HW/DX RTU W/ VAVs
- NEW HW/DX RTU
- NEW SPLIT AHU

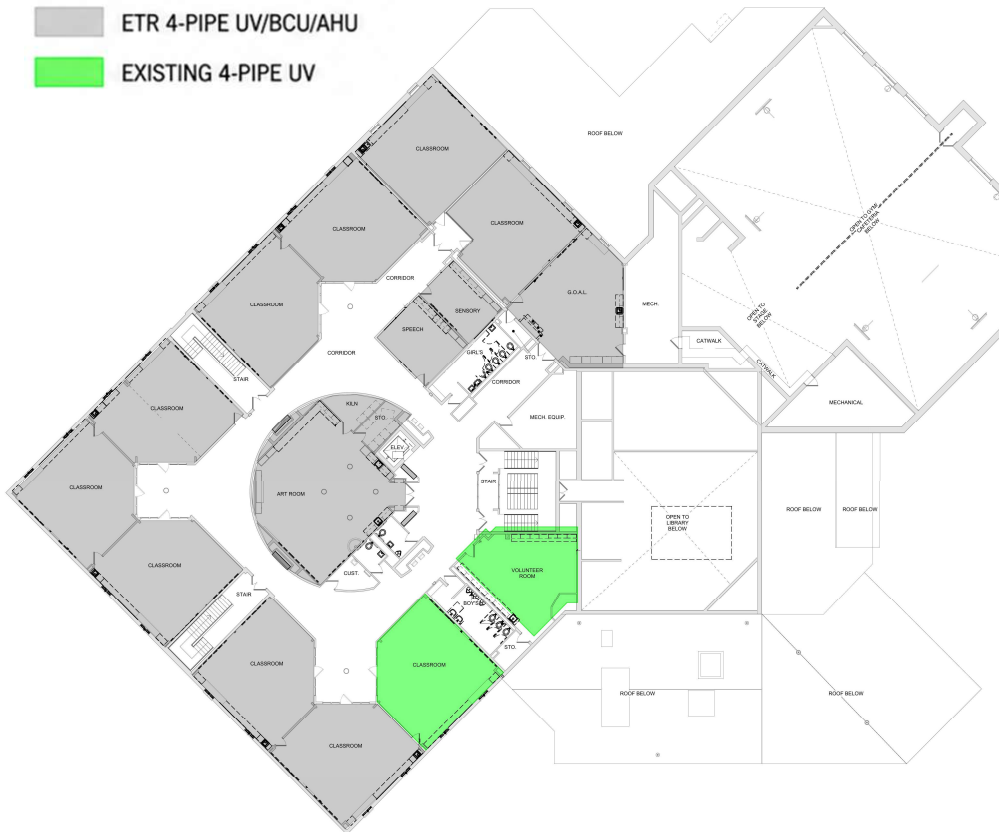


HOSACK ELEMENTARY SCHOOL

SECOND FLOOR HVAC PLAN COMPARISON

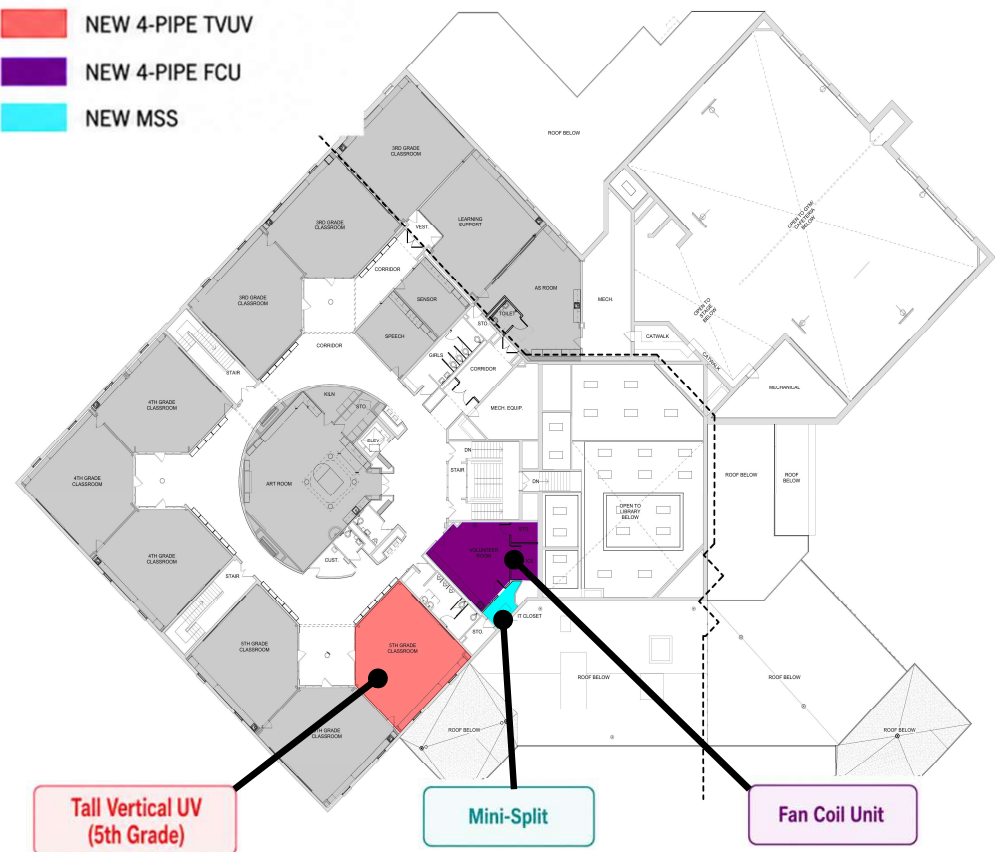
EXISTING SECOND FLOOR

- ETR 4-PIPE UV/BCU/AHU
- EXISTING 4-PIPE UV



PROPOSED SECOND FLOOR

- NEW 4-PIPE TVUV
- NEW 4-PIPE FCU
- NEW MSS



PEEBLES ELEMENTARY SCHOOL

Chiller Condensing Unit



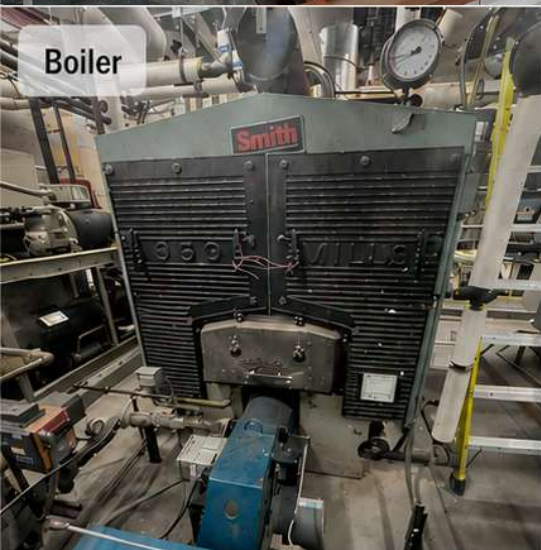
Chiller (R22 Refrigerant)



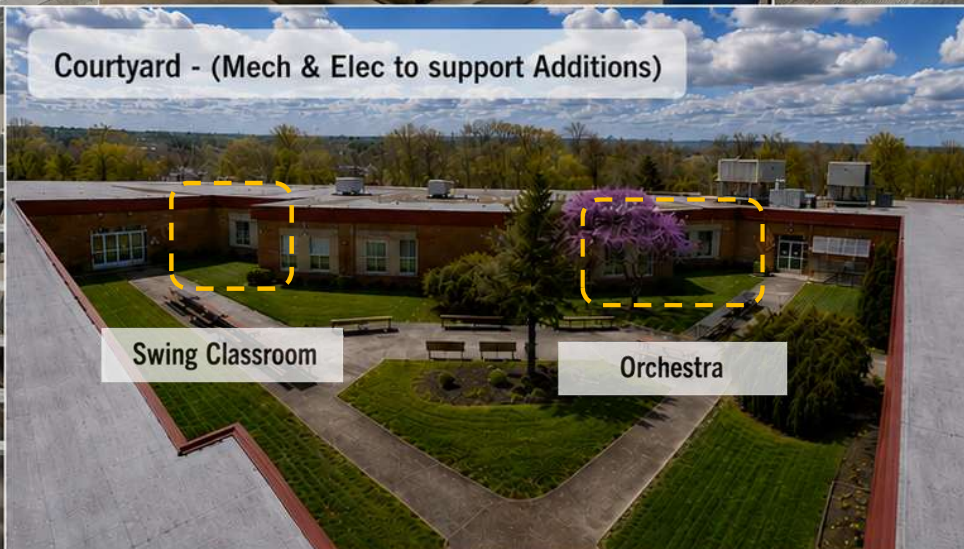
Library (LED Lighting Upgrade)



Boiler



Courtyard - (Mech & Elec to support Additions)



Boiler Circulation Pump



Existing Conditions & Proposed Scope of Work

Peebles Elementary School

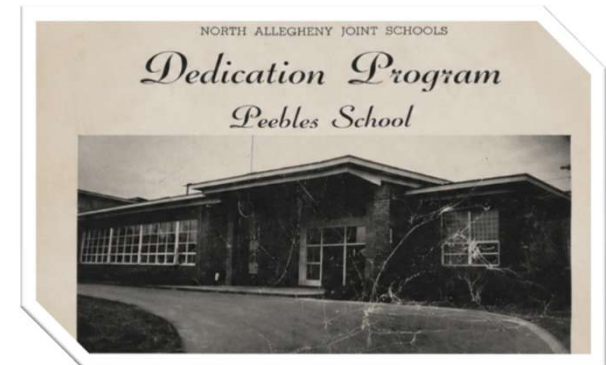
McClure's proposed improvements for Peebles Elementary School support the District's Facilities for the Future initiative by advancing the modernization of the building's mechanical and electrical infrastructure while providing the systems necessary to support the planned building additions. The Investment Grade Audit (IGA) focused on renewing the central heating and cooling plants, improving controls integration, upgrading building-wide lighting, increasing energy efficiency, and reducing long-term operating and maintenance costs.

The proposed scope of work includes modernization of the central heating and cooling plants, upgrades to the building automation system, replacement of select air handling equipment, building-wide replacement of existing interior and exterior lighting with new high-efficiency LED fixtures, and installation of new mechanical and electrical systems serving the planned additions. These improvements will establish modern building systems consistent with the District's recently renovated elementary schools, improving temperature control, ventilation, indoor air quality, lighting quality, and occupant comfort while creating a more reliable and maintainable facility.

Collectively, these ECMs represent a coordinated long-term investment in Peebles Elementary School's infrastructure, positioning the facility to provide reliable, energy-efficient operation for decades while supporting a healthy and comfortable learning environment.

Project Focus

- Heating and cooling plant modernization
- Mechanical and electrical upgrades supporting the building additions
- Building automation system (BAS) upgrades
- Building-wide LED lighting upgrades
- Improved energy efficiency, system reliability, and occupant comfort



PEEBLES ELEMENTARY SCHOOL – SCOPE OF IMPROVEMENTS

EXISTING CONDITIONS & PROPOSED SCOPE OF WORK

Modernize existing mechanical and electrical systems throughout the school while providing completely new building systems for the planned additions and renovated spaces. Work includes HVAC and central plant improvements, building controls, lighting, power, life safety, and technology infrastructure.

MECHANICAL

EXISTING BUILDING

- Replace one existing boiler and associated primary circulation pump
- Replace chilled-water plant with two air-cooled chillers, pumps, accessories, and controls
- Replace select existing AHUs, PTACs, and other HVAC equipment included in the base scope
- Upgrade the BAS and integrate new and ETR equipment into a new FX-90 supervisory controller
- Demo and replace approximately 172 GRDs associated with ETR equipment
- Ductwork and coil cleaning following completion of construction activities
- Extended warranties on new mechanical equipment (includes additions)

BUILDING ADDITIONS

- Provide complete HVAC systems for the planned additions and renovated spaces
- Provide new rooftop and indoor AHUs and HW/DX multi-zone VAV rooftop unit with associated VAV terminal units
- Provide new unit ventilator, mini-split, cabinet/unit heaters, exhaust, ductwork, piping, controls, and GRDs
- Integrate all new equipment into the building BAS

ELECTRICAL

EXISTING BUILDING

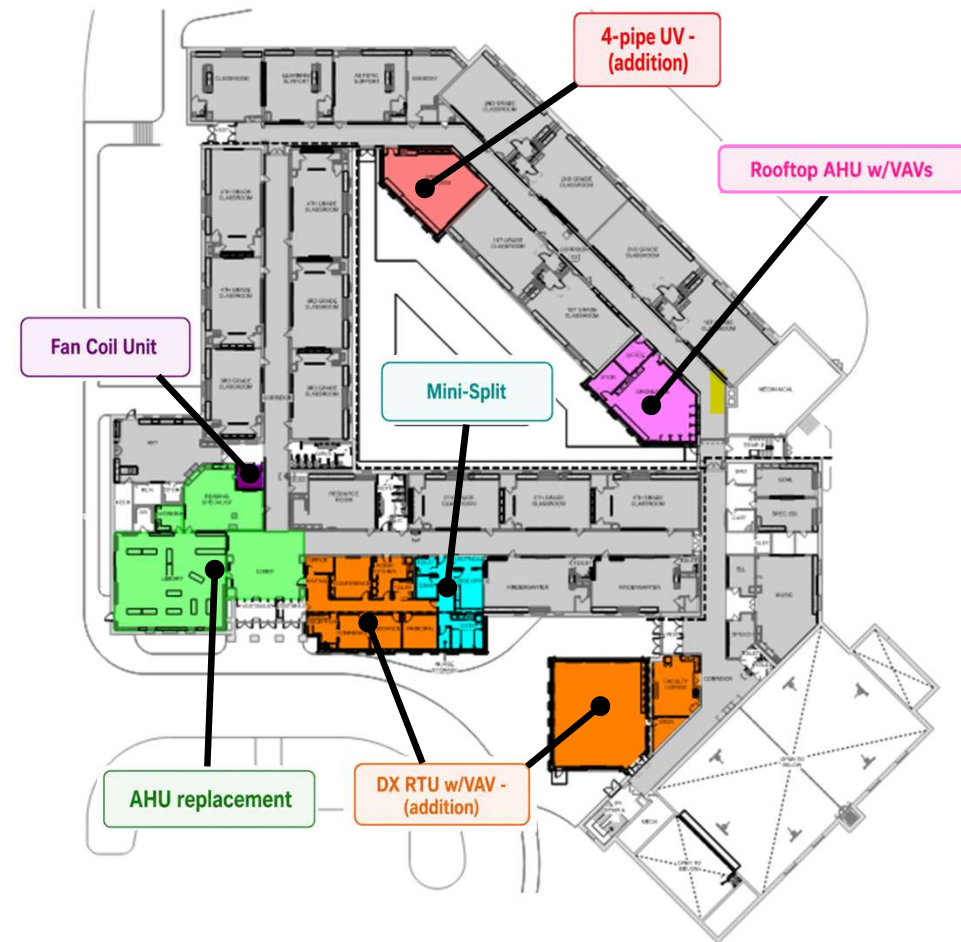
- Replace interior and exterior lighting with high-efficiency LED fixtures and controls
- Electrical modifications for new HVAC equipment
- Replace approximately 720 LF of classroom surface raceway
- Perform electrical system studies and clean existing distribution equipment
- Replace surge protection device and card-access system additions

BUILDING ADDITIONS

- Provide required electrical infrastructure to support new HVAC equipment and mechanical system upgrades
- Provide power, lighting, controls, data, fire alarm, and associated low-voltage systems
- Install new receptacles, floor boxes, and data outlets with cabling
- Provide new site lighting and temporary power for construction trailers
- Provide power and supporting infrastructure for new card-access devices

PEEBLES ELEMENTARY SCHOOL

FIRST FLOOR HVAC PLAN COMPARISON



NORTH ALLEGHENY SD – PROJECT / SAVINGS MATRIX

The Base Scope includes the core mechanical and electrical improvements at all three elementary schools. The Full Scope adds selected lifecycle and long-term maintenance improvements while maintaining the same guaranteed energy savings.

FULL SCOPE

TOTAL PROJECT COST	\$14,242,088
20-YEAR ENERGY SAVINGS	(\$1,439,730)
NET COST TO DISTRICT	\$12,802,358

ADDITIONAL IMPROVEMENTS IN FULL SCOPE

● Extended mechanical equipment warranties	\$47,383
● Surge protection	\$31,221
● GRD replacement – 399 total	\$135,841
● Duct and coil cleaning	\$186,786
● Additional project bonding	\$2,142

TOTAL FULL-SCOPE PREMIUM \$403,373

BASE SCOPE

TOTAL PROJECT COST	\$13,838,715
20-YEAR ENERGY SAVINGS	(\$1,439,730)
NET COST TO DISTRICT	\$12,398,985

INCLUDED IN BASE SCOPE

- Building additions and existing-restroom mechanical work
- Boiler replacements and ATC / BAS upgrades
- Chiller replacements with associated pumps, VFDs & accessories
- Building-addition electrical work – Includes Site Lighting
- Interior LED lighting upgrades
- Fire alarm replacement at Ingomar
- Temporary trailer power and card access



TOTAL PROJECT COST includes:

PM & CM costs, Design & Engineering costs, Training, Commissioning, Inspections and Project Warranties

INGOMAR ELEMENTARY SCHOOL – PROJECT / SAVINGS MATRIX

ECM	DESCRIPTION	PROJECT COST	20-YR SAVINGS	SCOPE
1	Building Additions and Existing Restrooms (Mechanical), Boiler (1) & Classroom UV Replacement, ATC Upgrades	\$3,158,175	\$138,215	Base
	Chiller (2) Replacement – includes associated pumps, VFDs and accessories	\$913,812	\$162,299	Base
2	Building Additions (Electrical) – Includes Site Lighting	\$683,140	\$4,564	Base
	Replace Fire Alarm System	\$378,448	–	Base
	Interior LED Lighting Upgrades	\$503,199	\$214,465	Base
	Temporary Trailer Power	\$39,237	–	Base
	Card Access	\$32,186	–	Base
	Extended Warranty – Mechanical Equipment	\$21,359	–	Full Only
	Surge Protection	\$10,407	–	Full Only
	GRD Replacement (91) on ETR equipment	\$32,272	–	Full Only
	Duct and Coil Cleaning	\$62,262	–	Full Only

TOTAL PROJECT COST + BOND PRICE

\$5,876,600

20-YEAR ENERGY SAVINGS

(\$519,543)

NET COST TO DISTRICT

\$5,357,057

HOSACK ELEMENTARY SCHOOL – PROJECT / SAVINGS MATRIX

ECM	DESCRIPTION	PROJECT COST	20-YR SAVINGS	SCOPE
3	Building Additions and Existing Restrooms (Mechanical), Boiler (1), ATC Upgrades	\$1,623,730	\$146,085	Base
	Chiller (2) Replacement – includes associated pumps, VFDs and accessories	\$782,360	\$36,172	Base
4	Building Additions (Electrical) – Includes Site Lighting	\$586,147	\$4,199	Base
	Interior LED Lighting Upgrades	\$685,953	\$229,274	Base
	Temporary Trailer Power	\$37,690	–	Base
	Card Access	\$33,005	–	Base
	Extended Warranty – Mechanical Equipment	\$12,814	–	Full Only
	Surge Protection	\$10,407	–	Full Only
	GRD Replacement (136) on ETR equipment	\$46,210	–	Full Only
	Duct and Coil Cleaning	\$62,262	–	Full Only

TOTAL PROJECT COST + BOND PRICE

\$3,910,550

20-YEAR ENERGY SAVINGS

(\$415,730)

NET COST TO DISTRICT

\$3,494,820

PEEBLES ELEMENTARY SCHOOL – PROJECT / SAVINGS MATRIX

ECM	DESCRIPTION	PROJECT COST	20-YR SAVINGS	SCOPE
5	Building Additions and Existing Restrooms (Mechanical), Boiler (1), ATC Upgrades	\$2,084,260	\$219,372	Base
	Chiller (2) Replacement – includes associated pumps, VFDs and accessories	\$805,927	\$36,083	Base
6	Building Additions (Electrical) – Includes Site Lighting	\$733,946	\$10,856	Base
	Interior LED Lighting Upgrades	\$589,524	\$238,146	Base
	Temporary Trailer Power	\$37,450	–	Base
	Card Access	\$45,511	–	Base
	Extended Warranty – Mechanical Equipment	\$13,210	–	Full Only
	Surge Protection	\$10,407	–	Full Only
	GRD Replacement (172) on ETR equipment	\$57,359	–	Full Only
	Duct and Coil Cleaning	\$62,262	–	Full Only

TOTAL PROJECT COST + BOND PRICE

\$4,473,583

20-YEAR ENERGY SAVINGS

(\$504,457)

NET COST TO DISTRICT

\$3,969,126

PROCUREMENT PROCESS MAP

Guaranteed Energy Savings Agreement (GESA)

1

ESCO SELECTION

- Advertise Request for Qualifications (RFQ)
- Select an Energy Service Company
- Establish goals for the IGA

2

INVESTMENT GRADE AUDIT

- Complete detailed design and phase development
- Develop firm costs and guaranteed savings
- Identify financial incentives and options

3

CONTRACTING

- Negotiate contract terms and conditions
- Execute Guaranteed Energy Services Agreement

SEPTEMBER 9 | Present IGA Results to District

SEPTEMBER 23 | Target Contract Execution