



Onondaga

Central Schools

Proposed Capital Improvement Project

October 17, 2023

2026 Capital Project Options

- A. Project that includes \$15.6 million without A/C for instructional buildings
- B. Project that includes \$15.6 million broken out into separate propositions with A/C for instructional buildings, but with significant changes to project scope.
- C. Two Propositions:
 - a. Project that includes estimated \$15.6 without A/C
 - b. Estimated \$5 million for A/C for instructional buildings- Estimated Impact per household \$0.27 per \$1,000 FV also broken into separate propositions
- D. A/C Annual Capital Outlay Project \$100,000 per year
 - a. 4 rooms per year



Project Summary by Building:

Building	Cost Estimate
Bus Garage/District Office	\$1,799,543
Jr/Sr High School	\$6,365,410
Industrial Art- Arg & Technologies	\$3,836,155
Information Technology Building	\$58,890
Rockwell ES	\$1,307,977
Wheeler ES	\$2,257,828
Estimated Total	\$15,656,003



Project Scope and Estimates:

Bus Garage/District Office



Scope	Cost Estimate
Site & Paving Upgrades	\$679,500
Roofing	\$396,753
Ventilation Upgrades	\$234,050
Fire Alarm Upgrades	\$6,040
Plumbing/Drainage	\$30,200
Electrical Service for Bus Charging	\$453,000
Estimated Total	\$1,799,543

Project Scope and Estimates:

Jr/Sr. High School



Scope	Cost Estimate
Athletic Field Upgrades/Site Work	\$383,540
Masonry Repointing and Roofing	\$1,976,439
Boiler Replacement	\$906,000
Ventilation Upgrades	\$211,400
Electrical Upgrades	\$365,798
Kitchen Renovation	\$1,789,350
Architectural/Plumbing	\$128,883
Convert Science Room into Art Room	\$ 604,000
Estimated Total	\$6,365,410

Project Scope and Estimates:

Industrial Arts



Scope	Cost Estimate
Exterior Walls - Plaster	\$158,550
Woodshop Renovation	\$1,220,080
Metal Shop - Renovation	\$845,600
Classrooms - Renovation	\$932,425
Greenhouse Addition	\$679,500
Estimated Total	\$3,836,155

Project Scope and Estimates:

IT Building	
Scope	Cost Estimate
Oil Tank Containment	\$3,020
Ventilation Upgrades	\$37,750
Plumbing	\$3,020
Air Conditioning Systems	\$15,100
Estimated Total	\$58,890



Project Scope and Estimates:



Rockwell Elementary

Scope	Cost Estimate
Architectural/Mechanical Work	\$229,459
Main Office Renovation	\$252,925
Kitchen Renovation	\$221,593
Boiler Replacement	\$604,000
Estimated Total	\$1,307,977

Project Scope and Estimates:

Wheeler Elementary



Scope	Cost Estimate
Site/Architectural Upgrades (Ceramic Corridor)	\$ 227,255
Replace Gym Partition	\$120,800
Boiler	\$ 604,000
Mechanical and Electrical Upgrades	\$ 224,990
Masonry/Plumbing	\$ 23,405
Kitchen Renovation	\$1,057,378
Total Projected Cost	\$ 2,257,828

Project Alternates

The following items were removed from the scope of the project so that the boilers could be included at Rockwell and Wheeler:

- **Jr Sr High School:**
 - Athletic field upgrade
 - Sounds system upgrades for stadium and fitness center
 - Drinking fountain replacement
- **Rockwell**
 - Replace existing Unit ventilator AC systems
- **Wheeler**
 - Outdoor Classroom
 - Stage conversion to program space
 - Stage Interior Ramp
 - Noise reducing ductwork Cafe and gym
 - Auditoria sound system, projector, and projection screen
 - Drinking fountain replacement



District Priorities



Priorities to date:

- Health and Safety
 - Boilers and electrical upgrades
 - Roofs
- Industrial Arts Building
- Kitchen Renovations - Wheeler ES & Jr/Sr HS
- Electric Bus Infrastructure

Investigation & Consideration for Air Conditioning to the Schools

Estimate Impact on Taxpayers:

- Debt and aid for the project alone
- Layering all Debt from the \$15.6 million to the \$19.6 million
- Estimate Cost \$19,661,284 - \$20,661,284
- District Contribution \$2,175,000
- Building Aid Ratio 85.20%
- Bond Percent 89%
- Estimated Tax increase is \$90,772 - \$113,465 on the levy
- Estimated Impact per household \$0.19 - \$0.24 per \$1,000 FV



Investigation for Air Conditioning to the Schools

- The addition of air conditioning to the proposed project will update debt/aid for \$19,661,284.
- For the additional \$4M an estimated break out of:
 - \$289,920 Industrial Arts (non aided)
 - \$1,710,080 MS/HS
 - \$1,000,000 Wheeler
 - \$1,000,000 Rockwell
 - \$4,000,000 TOTAL
- Due to the increased electrical requirements of the air conditioning systems, replacement of the electrical service for all three buildings will be required.
- Recent history indicates that adding building wide air conditioning will typically double the electrical utility and maintenance contracts bills.
- Plus plans in 15-20 years for replacement of the A/C equipment



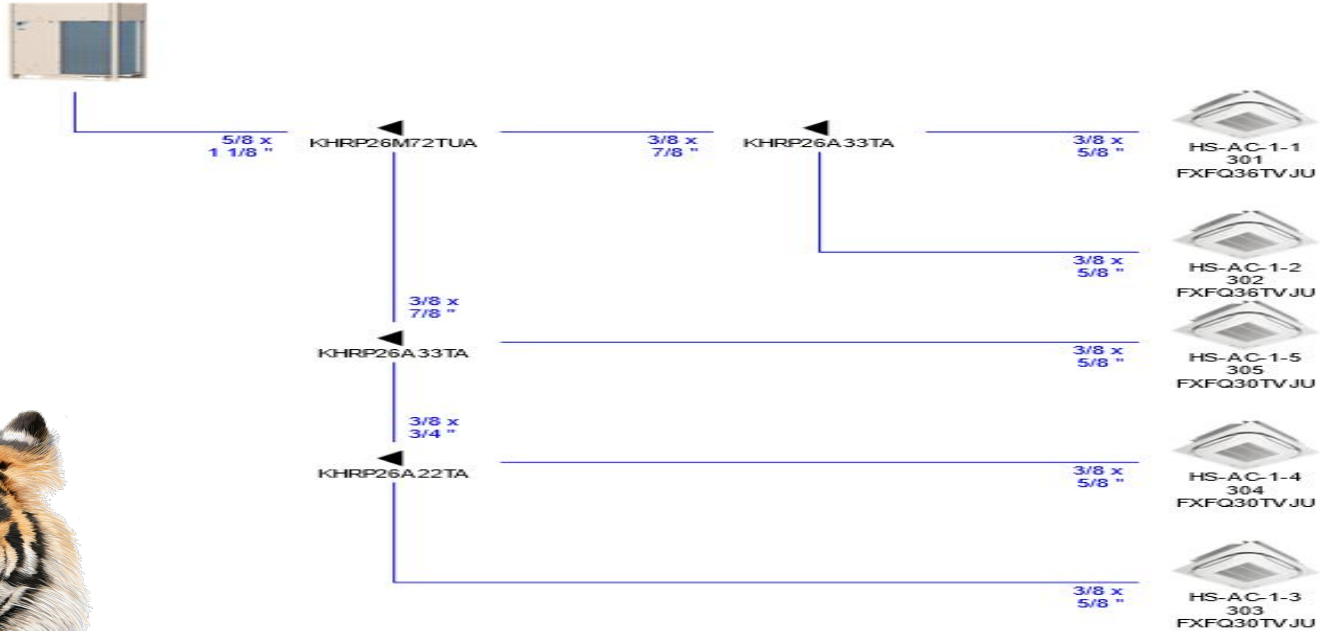
Investigation for Air Conditioning to the Schools

Elementary Schools:

- It is our understanding, the following spaces currently have air conditioning, Multi-Purpose Room, Gymnasium, Cafeteria, Main Office Suite, Nurse Suite, Library. At Rockwell, there are a handful of Classrooms that currently have air conditioning.
- The majority of the remainder of the spaces are currently heated and ventilated by unit ventilators. The unit ventilators have an anticipated life span of an additional 15 to 20 years.
- Due to the age of the unit ventilators, we would not recommend replacement with heating and cooling coils.
- For this application, we would recommend a cooling only variable refrigerant volume (VRV) application. This application would provide a roof mounted condensing unit that would send refrigerant to the indoor space mounted fan coil units. Each Classroom would be provided with a fan coil unit, which would provide individual room temperature control throughout the building.
- This concept typically is configured to provide one roof mounted condensing unit to serve four (4) to six (6) classrooms. See the following diagrams as an example layout of this concept, and pictures of the indoor fan coil unit and the roof mounted condensing unit.



Investigation for Air Conditioning to the Schools



Investigation for Air Conditioning to the Schools

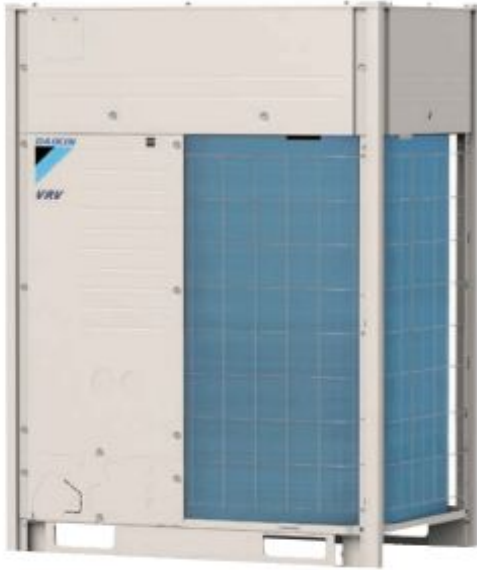
Classroom Ceiling Mounted Unit

INDOOR UNIT



Investigation for Air Conditioning to the Schools

Roof Mounted Unit to run 4-6 classroom units



Investigation for Air Conditioning to the Schools

The advantages of this concept include the following:

- Minimal ceiling work is required for installation. Installation can occur in the existing ceilings, or a wall mounted application.
- With multiple smaller roof mounted condensing units, additional structural requirements may not be required. This is in lieu of one centrally mounted chiller/ condensing unit for other applications.
- Each space will be provided with individual room temperature controls.
- The system can be integrated into the building DDC system to allow control based on building occupancy.
- By varying the refrigerant quantity, these systems can respond better to the actual space temperature requirements. Ultimately maximizing system efficiency.
- The indoor fan coil units utilize ECM motors, which improve efficiency and decrease system noise.



Investigation for Air Conditioning to the Schools

JR/SR High School

- It is our understanding, the following spaces currently have air conditioning, Gymnasium, Auditorium, Cafeteria, Concessions, Music Suite, Main Office Suite, Nurse Suite, Library, Staff Lounge and a handful of Classrooms that currently have air conditioning.
- Like the Elementary Schools, we would recommend implementation of the VRV systems for the Classroom and Office Spaces in this building.

District Consideration:

- A notable option from AECM has completed this work in other Districts with a Capital Outlay Project (COP) project for these applications. This allowed to do four (4) classrooms of cooling to stay within the \$100,000 cost of the typical COP application. Some Districts have slowly implemented building wide air conditioning by doing a COP project each year.



Investigation for Air Conditioning to the Schools

General Conditions for Consideration:

- **Replacement Costs in 15 years**
 - 2026 Estimated Costs \$5 million
 - 2041 Estimated Replacement
- **Increased annual electrical costs**
 - 2022-23 Annual cost: \$189,787
 - Projected first year after A/C installation: \$379,574 annually (without escalation)
- **Increased annual maintenance costs**
 - 2023-24 Annual contract: \$33,000
 - Projected first year after A/C installation: \$99,000 annually (without escalation)
 - Does not include supplies, materials and parts
 - Option- hire a HVAC Mechanic at ~\$75,000 plus benefits
- **Pros and Cons**
 - Total number of day at 90 degrees or more while school session
 - C- Expenses to taxpayers annually and replacement in 15 years
 - P- Comfort to the learning environment for teaching and learning



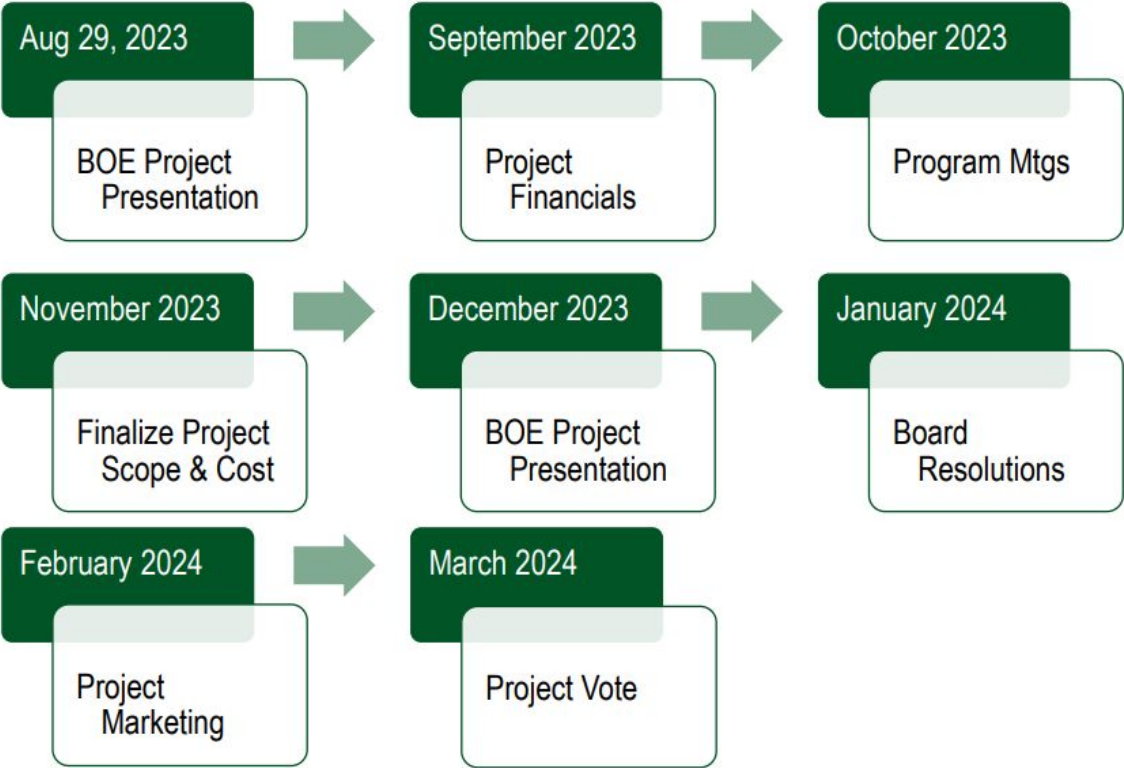
Investigation for Air Conditioning to the Schools

General Conditions for Consideration:

- **Addition of A/C through an Annual Capital Outlay Project**
 - **Limited \$100,000 annually**
 - **NYSED Building Aid applicable**
 - **Annual architectural, engineering and construction project management fees**
 - **Annual scope of work limited to dollar**
 - **Scope of work would estimatedly add four to six A/C units per year**
 - **At this rate it would 10-15 years add air conditioning to non air conditioned spaces**
- **Electrical Services will need to upgrades early to phase in the addition of A/C over the 10-15 years**
- **Longer period of time to grow the budget to handle increased funding to manage and run the A/C in the district**



Project Timeline



Questions

