

Levittown Public Schools

An Energy Conservation Plan



Project Overview



Energy Performance Contracting is:

An agreement that allows school districts to take budgeted utility and operational costs and reallocate them into energy saving capital Improvements without the need for Increased Taxes.

Energy Conservation
Measures (ECM) :
6

SED Payback:
17.9 years

Positive Cash Flow:
\$6,390,229

Project Cost:
\$12,210,238

District Annual
Energy Savings:
\$622,636

Energy Conservation Measures





Energy Conservation Measures:

LED Lighting
throughout the District
**over 29,000 sq. ft. of
new classroom
ceilings**

New Rooftop units at
Wisdom Lane Middle
School
Four (4) new Units

Two High Efficiency
Transformers
**Summit Lane (1) and
MacArthur High
School (1)**

Renewable Energy –
Photovoltaic Electric
Generation
**2.1 Megawatt (MW)
Districtwide**

Demand Controlled
Ventilation
**Wisdom Lane
Auditorium**

Cost and Savings Summary



Positive Cash Flow!



Proposed Project at 3.0% interest rate and 64.9% NYSED aid

	Year 1	Total
Tax exempt lease payment	(\$1,011,860)	(\$15,177,899)
Annual Energy Savings	\$622,636	\$13,332,079
NYSED aid	\$469,042	\$7,035,635
Annual O&M Savings	\$45,510	\$974,474
Estimated Rebates	\$225,940	\$225,940
Net cash flow to District	\$351,268	\$6,390,229

M&V Services at No Additional Cost to the District: For One (1) year.


Environmental Impact




Carbon off-set of 2,791 Metric Tons Equates to:



46,150
Trees
Grown for 10 years
in an urban scenario



6,462
Barrels
of oil




601
Passenger
vehicles



3,303
Acres
of pine forests



352
Homes'
energy use



314,057
Gallons
of gasoline

Questions?



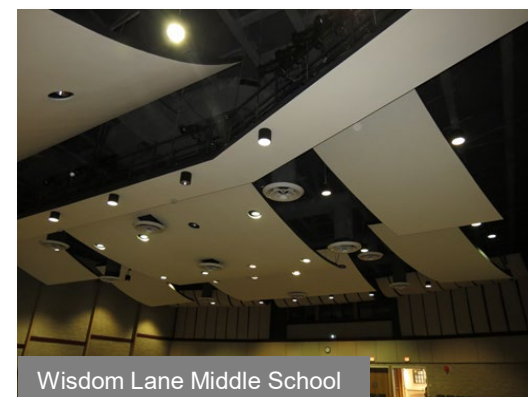
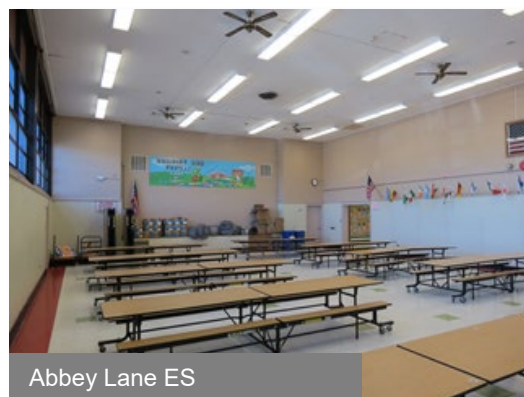
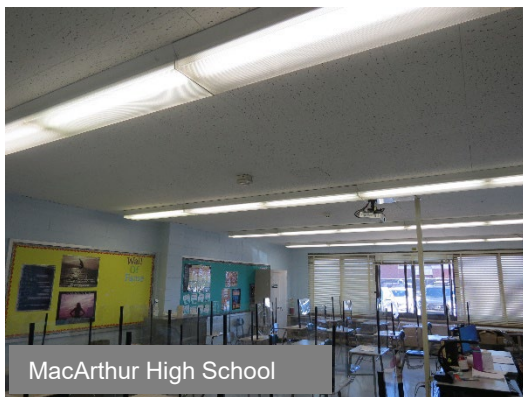
Appendix



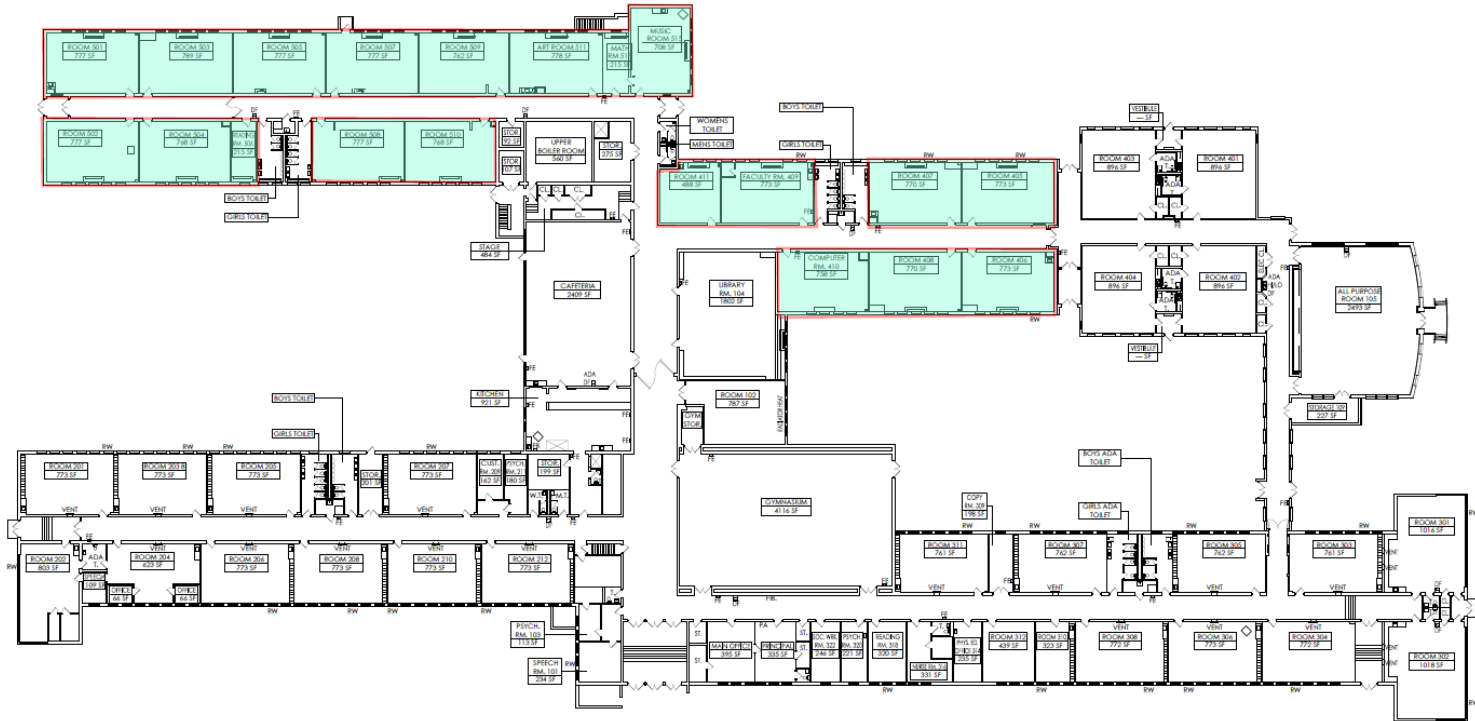
Energy Conservation Measures: Lighting – Interior & Exterior with Ceiling Replacement

- LED Lighting throughout the District – **Over 12,800 Upgrades**
- New LED Fixture/Retrofit Kits with Adaptable Controls in Classrooms, Hallways, Cafés and Offices
- New LED High Bay with Adaptable Controls and 2X4 troffer kits with adaptable controls in Gyms
- Exterior: Non-LED Exterior Lights to be converted to LED

Building	Ceilings (SF)
Abbey Lane Elementary School	13,220
Northside Elementary School	16,201
Total	29,421

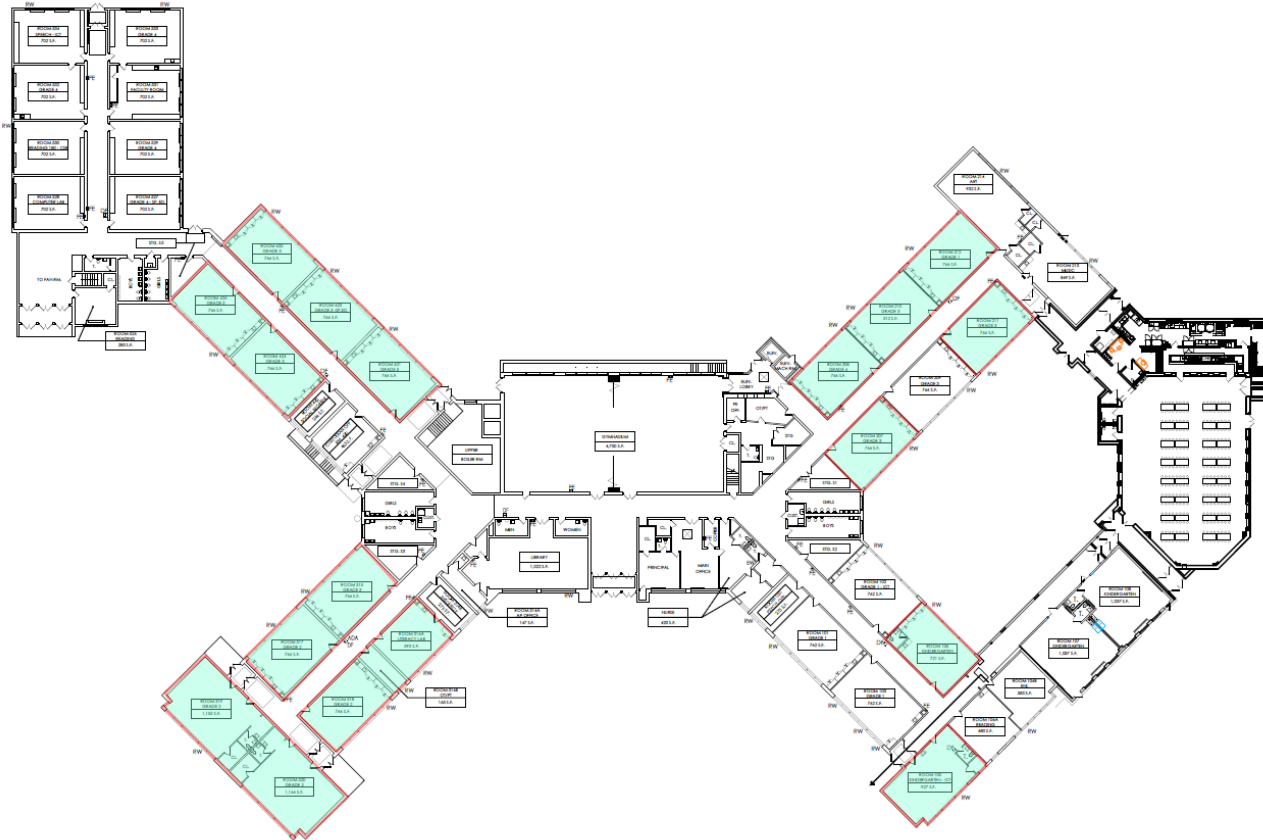


Energy Conservation Measures: Ceiling Replacements



Abby Lane Elementary School

Energy Conservation Measures: Ceiling Replacements



Northside Elementary School

Energy Conservation Measures: Condensing Unit / RTU Replacement



- New High Efficiency RTU and Condensing Units – at **Wisdom Lane Middle School**
 - Auditorium Condensing Unit – One (1)
 - Guidance RTU – One (1)
 - Library Condensing Units – Two (2)



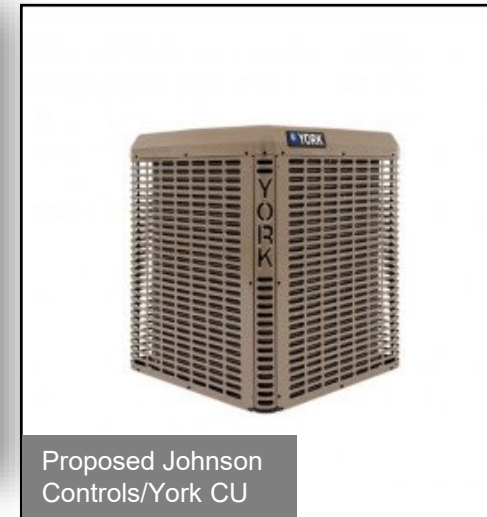
Proposed Johnson Controls/York RTU



Wisdom Lane MS Library Condenser



Wisdom Lane MS Guidance RTU



Proposed Johnson Controls/York CU

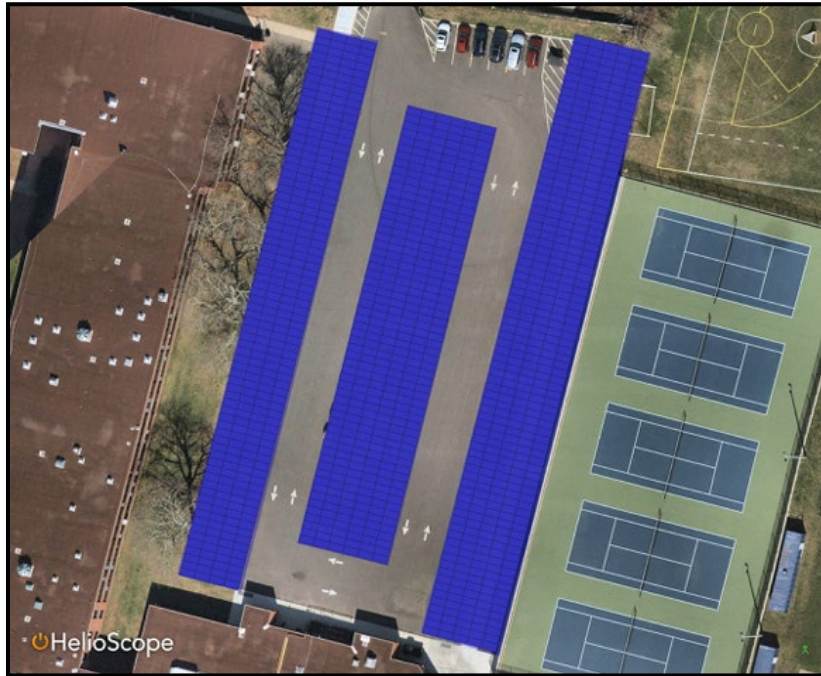
Energy Conservation Measures: Renewable Energy – Photovoltaic Electric Generation



- Total Carports Photovoltaics at the District : **2,112.5 kW DC**
- Full Benefit of PV Ownership

Building	Roof Mounted PV (kW-DC)	Carports PV (kW-DC)	Total PV (kW-DC)	Total kWh (%) Savings
Division Avenue High School	-	569.70	569.70	98%
Wisdom Lane Middle School	-	321.84	321.84	99%
Abbey Lane Elementary School	-	250.60	250.60	90%
East Broadway Elementary School	242.10	-	242.10	94%
Gardiners Avenue Elementary School	190.00	-	190.00	95%
Lee Road Elementary School	124.60	-	124.60	95%
Northside Elementary School	164.20	-	164.20	86%
Summit Lane Elementary School	-	249.48	249.48	98%
Total	720.90	1,391.62	2,112.52	

Energy Conservation Measures: Renewable Energy – Photovoltaic Electric Generation



Division Avenue High School



Wisdom Lane Middle School

Energy Conservation Measures: Renewable Energy – Photovoltaic Electric Generation



**Abbey Lane Elementary
School**



**East Broadway Elementary
School**

Energy Conservation Measures: Renewable Energy – Photovoltaic Electric Generation



**Gardiner Avenue Elementary
School**



Lee Road Elementary School

Energy Conservation Measures: Renewable Energy – Photovoltaic Electric Generation



Northside Elementary School



Summit Lane Elementary School

Energy Conservation Measures: Renewable Energy – Photovoltaic Electric Generation (Solar Canopy / Carport System)



JCI Carport Installation – Smithtown School District – 2.06 MW System

Energy Conservation Measures: Other Measures



Energy Management System –
Demand Control Ventilation

Energy Efficient Transformers