

Harborfields Central School District

An Energy Conservation Plan



October 20, 2021



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) :
15

SED Payback:
17.9 years

Positive Cash Flow:
\$3,437,661
(4% Interest Rate)

Project Cost:
\$7,198,992

District Annual
Savings:
\$392,325

Savings Guarantee
100%



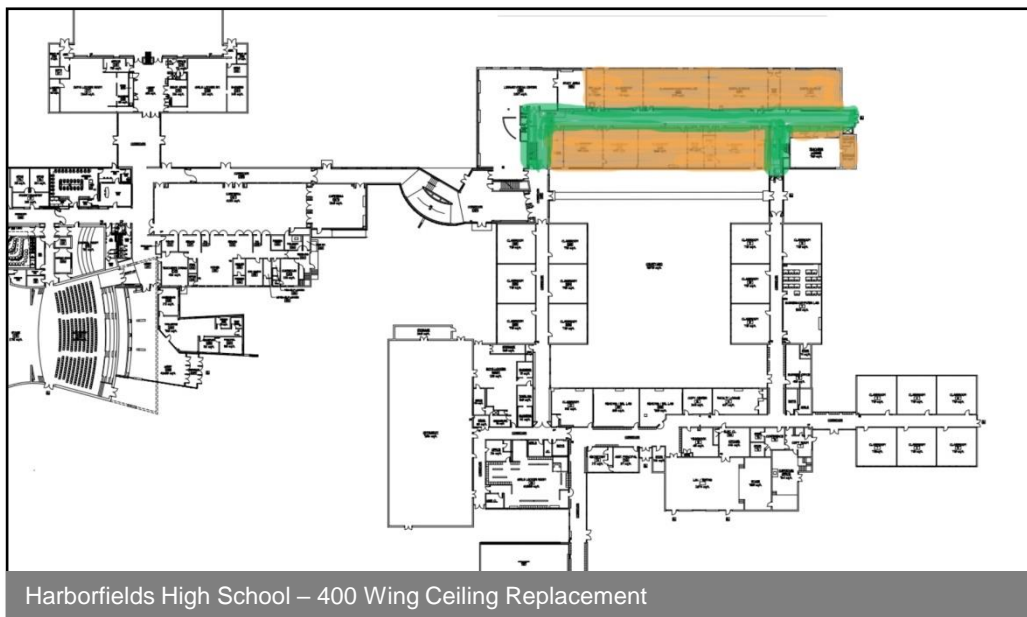
Energy Conservation Measures – Lighting – Interior & Exterior Retrofit

- Interior LED Lighting throughout the District – **Over 6,600 Upgrades**
- Recessed Troffer Prismatic Lens to Troffer Kit w/ Adaptable Controls in Classrooms, Offices and Auditorium
- LED High Bay w/ Adaptable controls and Wire Guards for Gyms
- Total LED Exterior Lighting to be Upgraded - **332**



Energy Conservation Measures – Ceiling Replacement

- New Ceilings at:
 - High School – 400 wing classrooms and corridors (14,370 sq. ft.)
 - TJ Lahey – Corridors (15,300 sq. ft.)



Energy Conservation Measures – Energy Management System



High School

- Supervisory Controllers
- DDC Retrofit of End Devices
- RTU Controls Upgrades - Main office and Lobby
- Exhaust Fan Controls – Seventy-Two (72)



Washington Drive Primary School

- Demand Controlled Ventilation – Café and Gym

Thomas J. Lahey Elementary School

- Exhaust Fan Controls
 - Twelve (12) roof exhaust fans
 - Two (2) relief dampers



Partnered with Cardinal Controls



Energy Conservation Measures – Boiler Replacement

- New Boiler Plant – **High School (South Boiler Room)**
- New Fulton dual fuel condensing boilers
- Designs Fully Coordinated with BBS



JCI Installed Fulton Condensing Boilers

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Energy Conservation Measures: Other Measures



Building Envelope-
Weatherization

Unit Ventilator
Mechanical
Refurbishments

Air Handling Unit /
RTU Replacement

Energy Efficient
Motors
Replacement

Heating System –
DHW/Furnace
Controllers

Heating System –
Pipe and Valve
Insulation

Refrigerator
Compressor
Controllers

AC Compressor
Controllers

Energy Efficient
Transformers

Plug Load
Controllers

Vending Machine
Controllers

Positive Cash Flow!



Proposed Project at 4.0% interest rate and 42.9% aid

	Year 1	Total
Tax exempt lease payment	(\$639,001)	(\$9,585,013)
Annual Energy Savings	\$268,498	\$6,578,115
Annual O&M Savings	\$123,828	\$2,651,435
NYSED aid	\$242,425	\$3,636,375
Estimated Rebates	\$156,750	\$156,750
Net cash flow to District	\$152,500	\$3,437,661

M&V Services at No Additional Cost to the District: For five (5) years.

Cash flow with 1.75% interest rate: **\$4,832,306**

Questions?

