

Chappaqua School District
August 5, 2015

Energy Conservation Plan – Phase 2



Project Overview

Annual District Energy Savings:
\$173,194
Project Cost:
\$3,336,396

Facility Improvement Measures
(FIM) :
10

Payback Period:
17.9 years

Savings Guarantee: **100%**

Energy Conservation Measures



Energy Conservation Measures – Energy Management System - Extension

- Removal of Andover System- HS, Bell and Roaring Brook
- Improved control, Reduced Maintenance

District Wide Energy Management System

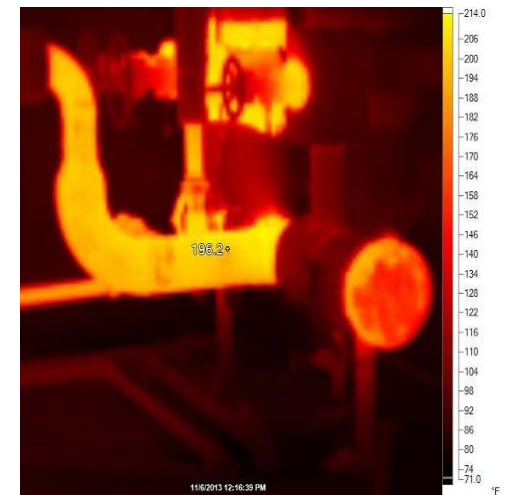
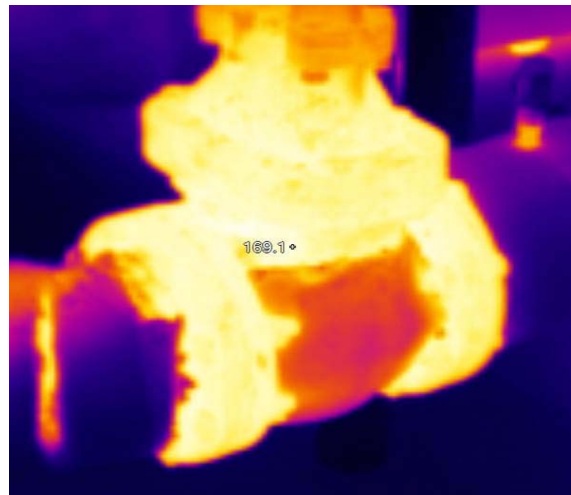


Annual Savings: \$2,803

Energy Conservation Measures – Pipe and Valve Insulation

- Pipe and Valve insulation in all the buildings not covered in phase 1
- All Areas in unconditioned spaces (per SED standards).

Existing Un-insulated Heating Distribution System



Annual Savings: \$8,151

Energy Conservation Measures – Boiler/Burner Replacement



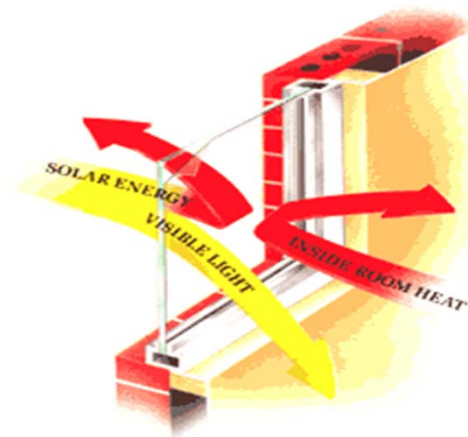
- Dual fuel natural gas boiler at Horace Greeley High School
- Natural Gas Supply from Main to Building.
- Demolition of existing boiler
- 2 Unilux Boilers high efficiency low pressure steam boilers. 90% efficiency.

Annual Savings: \$90,371

Energy Conservation Measures – Window Film

- Vista Low Emissivity series VE-50 Window Film at all the buildings
- Total Window Area Covered: 81,169 square feet districtwide

SQUARE FT.	DESCRIPTION			
9,153	Douglas Graflin School	N-2,045 S-1,312 E-2,132 W-3,664		
7,856	Bell Middle School	N-360 S-1,807 E-4,866 W-823		
15,246	Seven Bridges School	N-5,764 S-8,370 E-440 W-672		
8,758	Roaring Brook Elementary	N-597 S-748 E-3,576 W-3,837		
4,602	West Orchard Elementary	N-1,659 S-375 E-1,187 W-1,381		
35,554	HG High School	N-6,249 NW-8,951 NE-3,417 SW-4,815 SE-5,773		
		S-1,098 E-5,251		



Annual Savings: \$39,921

Energy Conservation Measures - Other Measures

- Water Conservation– Savings \$11,381
- Motor Replacements – Bell and W Orchard – Savings \$868
- Vending Machine Controls -13 machines – Savings \$1,431
- Plug Load Controllers – Savings \$34,043
- Fuel Catalyzer Installation – Savings \$9,277
- Transformers Replacements 7 Bridges and Roaring Brook – Savings \$5,549

Project Timeline

BOE to Authorize EPC:

July 2015

JCI to provide design criteria to ECG:

Sept 2015

ECG to prepare submission to SED:

Sept - Nov 2015

SED Approval & Financing:

Aug - Oct 2016

Construction commences:

Nov 2016

Construction substantial completion:

September 2017

Final Completion:

October 2017