



Photo by Paul Franz

Building Dashboard

Federal Street Elementary			125 Federal Street			
Building Data						
Structural Details		HVAC		Condition	Equipment	Type/Age
Year Built	1906 - North Building 1930's est - South Building 1989 - Link Building	Heating System	Condensing Gas-fired Hot Water Rooftop Air-Handling units in gym and cafeteria	EXCELLENT GOOD	Interior Lighting	all upgraded to LEDs 2018
Square footage	62,140	Air Conditioning	Some Window air conditioners. In all year.	GOOD	Exterior Lighting	Wall packs and pole lights are LEDs 2018
Envelope	Masonry	Hot Water Heater	3 Electric Hot Water Heaters - 50 gal each	FAIR GOOD	2 Vending Machines	Vending misers installed 2013
Roof	2016 - Flat Membrane North and South; Gabled Center. Gabled roof replaced in 2016	Ventilation	8 Exhaust Fans; 25 Ventilators	GOOD		
Windows	Double-Pane Replaced in 2016	EMS	Controls Boilers, Pumps, Outdoor Lights Upgrades in Scheduling and Demand Control Ventilation in 2015			
Insulation	8" Blown Cellulose Added to North Attic 2016 - Vermiculite in South Attic	Heat Distribution	Two-pipe system with two primary pumps and four zone pumps. Unit ventilators in classrooms with fin tube wings, common areas have convectors, baseboards or fan coil units.			
Building Summary	Building has 3 parts, North, South and Center. Variable Frequency Drives added 2013; Roof, boiler and windows replaced 2016; Insulation added North Attic, 2016. Challenges: Vermiculite in South attic; inefficient heat distribution system.					
Energy Profile - FY2019						
Energy Efficiency (BTU per Square Foot)						
Electric	Heat	Total				
12,826	37,544	50,370				
If Total is ≤ 40K	40K-80K	>80K				
Great!	OK	Needs Work				
Annual Energy Cost						
Electric	Heat	Total				
\$43,145	\$21,617	\$64,762				
Berkshire Gas Rate Class	G42					
Electric Service Rate Class	G2					
Average Monthly Demand	90 kW					
Completed Work						
Fiscal Year	Project	Project Cost	Grant/Rebates	Life Expectancy	Warranty	
2015	Siemens ESCO Work (Multiple buildings)	\$1,922,207	none	varied	varied	
2016	Attic Insulation and air sealing	\$10,466	\$5,233	15-30 years	1 year	
2016	Replaced boiler, windows, and roof (MSBA)	\$3,594,356	\$2,766,057	20+ years	N/A	
2019	LED lighting upgrade- on bill financed	\$31,857	\$14,699	20+ years	5 years	
Capital Improvement Plan Projects						
Fiscal Year	Project	Cost	Life Expectancy	Warranty		
2020	Flooring Replacement - asbestos abatement (shared by 4 schools)	\$550,000	N/A	N/A		
2020	Fencing Replacement (all schools)	\$23,000	N/A	N/A		
2020	Elevator Replacement	\$250,000	N/A	N/A		
2020	Paving	\$95,000	N/A	N/A		
Additional Maintenance and Replacement Projects Identified						
	Project	Predicted Cost	Payback Time	Supporting Info		
	Motion detectors for interior lighting	N/A	N/A	N/A		
Audits/Assessments						
Fiscal Year	Type	Findings				
2009	Siemens Whole building assessment	Report available upon request				
2016	CET Insulation assessment	North attic would benefit from more insulation and air sealing				
2016	Solect Solar Assessment	115 kW system on roof proposed - in queue for SMART Program				

