



City of Somerville School Buildings Capital Investments

Inventory:	
Buildindg Name	Construction Date
Albert F. Argenziano School	2006
Arthur D. Healey School	1997
Benjamin G. Brown School	1900
Cummings School	1930
East Somerville Community School	2012
Edgerly Education Center	1920
John F. Kennedy Elementary School	1957/1997
Michael E. Capuano Early Childhood Center	2002
Somerville High School	2021
West Somerville Neighborhood School	1995
Winter Hill Community Innovation School	1974

Critical for Building Operation

Building Operational Breakdown:		
Group	Components	
Roof	Flat Roof Weatherproof Membrane	Structural Steel
	Sloped Shingle Roof	Equipment Dunnage
	Insulation	Equipment Penetration
	Decking	(duct, piping, ventilation, electrical, lightning, etc.)
Envelope	Exterior veneer	Structure
	Moisture control	Windows
	Insulation	Doors
HVAC Heating	Natural Gas boilers	
	Pumps	
	Piping/Piping appurtenances	
HVAC Cooling	Water/Air cooled electric chillers	Piping/Piping appurtenances
	Pumps	DX-Split Systems

Action Plan²

0-5 Year Response Capital Items						
School	Component Group			End-of-Life (Years) ¹		Order of Magnitude Costs
	HVAC	Envelope	Roof	Existing Equipment	New Replacement Equipment	
Albert F. Argenziano School	• Boiler heating plant replacement			0	15-25	\$4M - \$6M
	• Automated building controls upgrade			0	15-25	\$0.5M - \$1.5M
	• MEP equipment delinquent maintenance/rebalancing/ re-commissioning			N/A	+5-10 ³	\$1M - \$1.5M
Arthur D. Healey School	• Boiler heating plant replacement & upgrade			0	15-25	\$4M - \$6M
	• Terminal equipment replacement (Unit Ventilators, VAV Boxes, Unit Heaters, etc.)			3	15-25	\$2M - \$4M
	• Automated building controls upgrade			0	15-25	\$0.5M - \$1.5M
	• MEP equipment delinquent maintenance/rebalancing/ re-commissioning			N/A	+5-10 ³	\$1M - \$1.5M
			• Complete roof replacement & upgrade	0	25-35	\$6M - \$8M
Benjamin G. Brown School	N/A	N/A	N/A	N/A	N/A	N/A
Cummings School	N/A	N/A	N/A	N/A	N/A	N/A
East Somerville Community School	• Automated building controls upgrade			0	15-25	\$0.5M - \$1.5M
	• MEP equipment delinquent maintenance/rebalancing/ re-commissioning			N/A	+5-10 ³	\$1M - \$1.5M
Edgerly Education Center	N/A	N/A	N/A	N/A	N/A	N/A
John F. Kennedy Elementary School	• MEP equipment delinquent maintenance/rebalancing/ re-commissioning			N/A	+5-10 ³	\$1M - \$1.5M
	• Pool plant rennovation			3	15-25	\$750K-\$1M
			• Complete roof replacement & upgrade	3	25-35	\$2M - \$7M
Michael E. Capuano Early Childhood Center	• MEP equipment delinquent maintenance/rebalancing/ re-commissioning			N/A	+5-10 ³	\$1M - \$1.5M
	• Automated building controls upgrade			0	15-25	\$0.5M - \$1.5M
			• Complete roof replacement & upgrade	3	25-35	\$2M - \$7M
Somerville High School	• MEP equipment delinquent maintenance/rebalancing/ re-commissioning			15-20	N/A	\$500K-\$1M
West Somerville Neighborhood School	• Chilled water plant replacement & upgrade			0	15-25	\$2M - \$4M
	• Terminal equipment replacement (Unit Ventilators, VAV Boxes, Unit Heaters, etc.)			0	15-25	\$750K - \$1M
	• Automated building controls upgrade			0	15-25	\$450K - \$800K
	• MEP equipment delinquent maintenance/rebalancing/ re-commissioning			N/A	+5-10 ³	\$1M - \$1.5M
			• Complete roof replacement & upgrade	0	25-35	\$2M - \$7M
Winter Hill Community Innovation School	Construction of New School					

5-10 Year Response Capital Items						
School	Component Group			End-of-Life (Years) ¹		Order of Magnitude Costs
	HVAC	Envelope	Roof	Existing Equipment	New Replacement Equipment	
Albert F. Argenziano School	• Chilled water plant replacement			4-8	15-25	\$2M - \$4M
	• Complete terminal end replacement (unit ventilators, exhaust fans, air handlers, VAV boxes, thermostats, etc.)			5-10	15-25	\$1M - \$3M
		• Complete envelope rennovation & upgrade		5-10	50-100	\$2M - \$4M
Arthur D. Healey School	• Chilled water plant replacement			1-5	15-25	\$2M - \$4M
	• Airside equipment (air handler) replacement and upgrades			5-10	15-25	\$1M - \$2M
		• Windows/ Doors/ Frames replacements & repairs		1-5	20-30	\$1M - \$2M
Benjamin G. Brown School	N/A					
Cummings School	N/A					
East Somerville Community School	• MEP equipment delinquent maintenance/rebalancing/ re-commissioning			N/A	+5-10 ³	\$1M - \$1.5M
Edgerly Education Center	N/A					
John F. Kennedy Elementary School	• Complete terminal end replacement (unit ventilators, exhaust fans, air handlers, VAV boxes, thermostats, etc.)			5-10	15-25	\$1M - \$3M
	• Boiler heating plant replacement & upgrade			5-8	15-25	\$4M - \$6M
		• Windows/ Doors/ Frames replacements & repairs		0	20-30	\$1M - \$2M
			• Complete roof replacement & upgrade	0	25-35	\$2M - \$7M
Michael E. Capuano Early Childhood Center		• Complete envelope rennovation & upgrade		5-10	50-100	\$2M - \$4M
Somerville High School						
West Somerville Neighborhood School	• Boiler heating plant replacement & upgrade			5-10	15-25	\$4M - \$6M
		• Complete envelope rennovation & upgrade		5-10	50-100	\$2M - \$4M
Winter Hill Community Innovation School	Construction of New School					

10+ Year Response Capital Items						
School	Component Group			End-of-Life (Years) ¹		Order of Magnitude Costs
	HVAC	Envelope	Roof	Existing Equipment	New Replacement Equipment	
Albert F. Argenziano School	• MEP equipment delinquent maintenance/rebalancing/ re-commissioning			N/A	+5-10 ³	\$1M - \$1.5M
			• Complete roof replacement & upgrade	0	25-35	\$2M - \$7M
Arthur D. Healey School		• Complete envelope rennovation & upgrade		5-10	50-100	\$2M - \$4M
Benjamin G. Brown School	N/A					
Cummings School	N/A					
East Somerville Community School	• Complete terminal end replacement (unit ventilators, exhaust fans, air handlers, VAV boxes, thermostats, etc.)			5-10	15-25	\$1M - \$3M
	• Complete Heating and Cooling plant replacement			5-10	15-25	\$4M - \$8M
		• Complete envelope rennovation & upgrade		5-10	50-100	\$2M - \$4M
			• Complete roof replacement & upgrade	0	25-35	\$2M - \$7M
Edgerly Education Center	N/A					
John F. Kennedy Elementary School	No anticipated capital investments					
Michael E. Capuano Early Childhood Center	• Complete Heating and Cooling plant replacement			4-8	15-25	\$4M - \$8M
	• Complete terminal end replacement (unit ventilators, exhaust fans, air handlers, VAV boxes, thermostats, etc.)			5-10	15-25	\$1M - \$3M
Somerville High School	• MEP equipment delinquent maintenance/rebalancing/ re-commissioning			N/A	+5-10 ³	\$750K-\$1.5M
West Somerville Neighborhood School	No anticipated capital investments					
Winter Hill Community Innovation School	Construction of New School					

Notes:

- 1) End of Life refers to the amount of years that particular piece of equipment or material is expected to last (in years) starting from the time installed. For existing equipment, this would represent how many years are left based on date of original installation, manufacturers suggested lifespan, how well said equipment has been maintained, physical appearance, and history of complications. For replacement equipment yet to be installed, the number of years represent its anticipated life span based on industry standards, manufacturers suggested value, and how complicated it is to maintain.
- 2) The Action Plan has been broken up into three separate timelines intended to represent urgency and financial burden associated with each level of urgency. Not all items within the same timeline are expected to be initiated concurrently with other building's Action Items.
- 3) End of life in this context refers to the added lifespan of equipment and/or materials often associated with thorough maintenance and re-commissioning procedures.