tier	BUILDING	HVAC SYSTEM				EXHAUST SYSTEM	VENTILATION ASSESSMENT STATUS	FILTER ASSESSMENT STATUS
2	Alfred M. Glickman Elementary School	Two Pipe w/ Univents	4 AHUs			Exhaust Vents to Roof, Operable	ASHRAE-62	MERV-13
2	Alfred Zanetti Montessori School	Two Pipe w/ Univents	3 AHUs			Exhaust Vents to Roof, Operable	ASHRAE-62	MERV-13
2	Alice B. Beal Elementary School	Two Pipe w/ Univents	2 AHUs	2 RTUs		Exhaust Vents to Roof, Operable	ASHRAE-62	MERV-13
2	Arthur T. Talmadge Elementary School	2 AHUs				Return air to AHUs, Operable	ASHRAE-62	MERV-13
2	Balliet (Rosewell) Elementary School	Steam Univents				Gravity Exhaust, Non-Operable	ASHRAE-62	MERV-13
2	Balliet Middle School (Balliet-Seymour)	Steam Univents	4 RTUs			Gravity Exhaust, Non-Operable	ASHRAE-62	MERV-13
3	Brightwood Elementary School	Steam Univents				Gravity Exhaust, Non-Operable	NATURAL	NONE
1	Chestnut Accelerated Middle School	Two Pipe (Centrifugal Chiller) w/ univents	15 AHUs			Return air to AHUs, Operable	ASHRAE-62	MERV-13
2	Daniel B. Brunton Elementary School	Two Pipe w/ Univents	5 AHUS			Exhaust Vents to Roof, Operable	ASHRAE-62	MERV-13
1	Early Childhood Center	5 AHUs	2 RTUS	VAVs		Return air to AHUs & RTUs, Operable	ASHRAE-62	MERV-13
1	Edward P. Boland Elementary School	Two Pipe	VAVs	10-AHUs		Return air to AHUs, Operable	ASHRAE-62	MERV-13
1	Elias Brookings Middle School	Fan Coil Unit	5 RTUs incl. 1 Rooftop MAU			Return air to RTUs, Operable	ASHRAE-62	MERV-13
1	Forest Park Middle School	22 RTUs	VAVs			Return air to RTUs, Operable	ASHRAE-62	MERV-13
2	Frank H. Freedman Elementary School	Two Pipe w/Univents	2 AHUs			Exhaust Vents to Roof, Operable	ASHRAE-62	MERV-13
1	Frederick Harris Elementary School	Two Pipe w/ Univents	4 AHUs	2 MAUs		Exhaust Vents to MAUs, Operable	ASHRAE-62	MERV-13
2	German Gerena Community Elementary School	Two Pipe w/ Univents	24 AHUs			Return air to AHUs, Operable	ASHRAE-62	MERV-13
2	Glenwood Elementary School	Steam Univents				Gravity Exhaust, Non-Operable	ASHRAE-62	MERV-13
1	High School of Commerce	Two Pipe w/ Univents	4 AHUS	9 RTUS	VAVs (A Building)	Exhaust Vents to Roof, Operable	ASHRAE-62	MERV-13
2	Hiram L. Dorman Elementary School	Steam Univents				Gravity Exhaust, Non-Operable	ASHRAE-62	MERV-13
3	Homer Street Elementary School	Steam Radiators				Gravity Exhaust, Non-Operable	NATURAL	NONE
2	Indian Orchard Elementary School	Two Pipe w/ Univents	4 AHUs	2 MAUs		Return air to AHUs & MAUs, Operable	ASHRAE-62	MERV-13
2	John F. Kennedy Middle School	Two Pipe w/ Univents	6 AHUS			Exhaust Vents to the Roof, Operable	ASHRAE-62	MERV-13
2	John J. Duggan Middle School	Two Pipe w/ Univents	12 AHUs	2 RTUs		Exhaust Vents to Roof, Non-Operable	ASHRAE-62	MERV-13
3	Kensington Avenue Elementary School	Steam Radiators				Wheel Driven Exhaust, Non-Operable	NATURAL	NONE
2	Liberty Elementary School	Two Pipe w/Univents (New)	2 AHUs			Exhaust Vents to Roof, Operable	ASHRAE-62	MERV-13
3	Springfield Alternative Campus	Two Pipe Steam Radiators Classroom	3 AHU Gym Building			Exhaust Vents to Roof, Non-Operable	NATURAL	NONE
2	Lincoln Elementary School	Two Pipe w/Univents				Exhaust Vents to Roof, Operable	ASHRAE-62	MERV-13
2	M. Marcus Kiley Middle School	Two Pipe w/Univents	6 AHUs			Exhaust Vents to Roof, Operable	ASHRAE-62	MERV-13
2	Margaret C. Ells Elementary School	Two Pipe w/ Univents	1 AHU			Exhaust Vents to Roof, Operable	ASHRAE-62	MERV-13
1	Mary A. Dryden Veterans Memorial Elementary School	Two Pipe w/Univents	1 AHU	2	MUAs	Return air to MAUs, Operable	ASHRAE-62	MERV-13
2	Mary M. Lynch Elementary School	Two Pipe Steam w/Univents	2 AHUs			Exhaust Vents to Roof, Operable	ASHRAE-62	MERV-13
2	Mary M. Walsh Elementary School	Two Pipe Steam w/Univents	2 AHUs			Exhaust Vents to Roof, Operable	ASHRAE-62	MERV-13
2	Mary O. Pottenger Elementary School	Two Pipe Steam w/Univents	2 AHUs			Exhaust Vents to Roof, Operable	ASHRAE-62	MERV-13
2	Milton Bradley Elementary School	Two Pipe w/ Univents	7 AHUs	Basement VAVs		Exhaust Vents to Roof, Operable	ASHRAE-62	MERV-13
1	Rebecca Johnson Elementary School	Two Pipe w/ Univents	2 AHUs	12 RTUs	VAVs	Return air to AHUs & RTUs, Operable	ASHRAE-62	MERV-13
1	Roger L. Putnam Vocational High School	Four Pipe	14 RTUs			Return air to RTUs, Operable	ASHRAE-62	MERV-13
2	Samuel Bowles Elementary School	Two Pipe Steam w/Univents	2 AHUs			Gravity Exhaust, Non-Operable	ASHRAE-62	MERV-13
2	South End Middle School	Two Pipe w/ Univents	2-AHUs	1 ERV		Exhaust Vents Outside, Operable	ASHRAE-62	MERV-13
2	Springfield Central High School	Centrifugal Heating & Cooling	6 AHUs	2 MAUs		Exhaust Vents to Roof, Operable	ASHRAE-62	MERV-13
3	Springfield Conservatory of the Arts	Centrifugal Heating & Cooling	RTU			None Observed	NATURAL	NO MERV RATING
1	Springfield High School of Science & Technology	Steam Perimeter Heat	16 AHUs			Return air to AHUs, Operable	ASHRAE-62	MERV-13
2	Springfield Public Day Elementary School	Two Pipe w/ Univents	2 AHUs	1 RTU		None	ASHRAE-62	MERV-13
2	Springfield Public Day High School	Two Pipe w/ Univents	2 RTUs			Exhaust Vents to Roof, Operable	NATURAL	MERV-13
3	Springfield Public Day Middle School	Two Pipe w/ Univents				Gravity Exhaust, Non-Operable	NATURAL	NONE
1	STEM Middle Academy	2 RTUs	VAVs			Return air to RTUs, Operable	ASHRAE-62	MERV-13
2	Sumner Avenue Elementary School	Two Pipe w/ Univents	3 AHUs	2 MAUs		Exhaust Vents to Roof, Operable	ASHRAE-62	MERV-13
1	Van Sickle Middle School	Four Pipe	5 AHUs	13 RTUs		Return air to AHUs & RTUs, Operable	ASHRAE-62	MERV-13

2	Warner Elementary School	Two Pipe	Steam w/Univents	2 AHUs		Gravity Exhaust, Non-Operable	ASHRAE-62	MERV-13
2	Washington Street Elementary School	Steam Radiators				Gravity Exhaust, Non-Operable	ASHRAE-62	MERV-13
2	White Street Elementary School	Two Pipe Steam and Hot water w/Univents	Steam and HW w/ Univents			Gravity Exhaust, Non-Operable	ASHRAE-62	MERV-13
2	William N. DeBerry Elementary School	Two Pipe Steam and Hot water w/Univents	Steam and HW w/ Univents	3 AHUs		Exhaust Vents to Roof, Operable	ASHRAE-62	MERV-13

TYPES OF HVAC SYSTEMS / DEFINITIONS:

Two Pipe System Only two pipes feed critical equipment making either heating OR cooling possible, not both.

Four Pipe System Both heating and cooling can occur.

Uninvent Each classroom is provided with heating and/or cooling via a rectangular unit positioned on the exterior wall of the classroom. Univents may draw from interior room air and exterior fresh air for filtration, and tempering, prior to discharge into room.

RTU (Roof Top Unit) Heating and/or cooling is provided from a mechanical unit located on the roof which uses an electrical coil or gas burner/compressor and condenser to provide warm or cool air to the occupied space. Each unit contains an economizer which regulates the percentage of outside air brought in. Factors such as outside temperature, relative humidity, and carbon dioxide (monitored by sensor units located in or on the RTU), may affect the volume of fresh air intake and, if needed, may be adjusted.

AHU (Air Handling Unit) Heating and/or cooling is generated by the boiler/chiller and pumped through the mechanical AHU, which may be located in various rooms (i.e. mechanical room) or spaces (i.e. ceiling cavities) within the building. The AHU provides heated or cooled air to the occupied space(s) or to VAVs.

VAV (Variable Air Volume) VAVs provide heated or cooled air to classrooms in newer schools without Uninvents. The VAV uses an actuated damper to control the supplied air to the space. Some have coils which reheat or cool the air to individual occupied area set points.

MAU (Make-up Air Unit) A dedicated mechanical unit that serves the building's fresh air needs.

VENTILATION ASSESSMENT STATUS:

NATURAL Identifies ventilation systems that rely on windows and/or door openings in conjunction with exhaust ventilation for introduction of outside air into the building.

ASHRAE-62 Identifies mechanical ventilation systems that provide fresh air ventilation and air changes according to the system design parameters and have the ability to increase the percentage of fresh air ventilation.

FILTER ASSESSMENT STATUS:

NONE* There is no mechanical building filtration for this HVAC system.

MERV-13 Identifies mechanical systems that can increase the filtration efficiency to MERV 13 without a static pressure drop. The two- inch filter bank on HVAC systems will readily accept two-inch MERV-13 filters.

* These buildings had Carrier units installed