

# GEATAIN ENGINEERING

## CASE STUDY - 1945 3<sup>rd</sup> Avenue



### BACKGROUND

1945 3<sup>rd</sup> Avenue is a 20-story, 145,382 square foot co-op residential building located in Manhattan, New York. Constructed in 1961, the building houses 117 residential units. The building receives heat and DHW from the boiler room located at 2086 2nd Ave, which has three low-pressure gas-fired steam boilers. These boilers are controlled by a Multi-MOD Platinum Heat-Timer. The building has two exhaust fans on the roof for ventilation that connect to exhaust grilles in hallways and bathrooms. The boiler room has an exhaust fan and louvers, and the elevator room has a gravity ventilator.

### HOW GEATAIN ENGINEERING HELPED

- Evaluated climate zone, envelope tightness, and building layout to determine optimal location and size for heat pumps.
- Worked extensively with building engineers to enhance daily operations and preventative maintenance procedures.
- Surveyed property to decrease plug loads through smart strips and equipment sleep modes, resulting in multiplicative plug load savings.

### BENEFITS

- Provided an all-encompassing funding package to decrease initial capital outlay.
- Uncovered obscure funding opportunities to decrease burden of equipment improvements.



### CHALLENGES

- Poor building envelope leading to excessive heat loss.
- Continuous use of building devices wastes energy.
- Significant inefficiencies in lighting system. Lighting system inefficiency.

### SOLUTIONS

- Plug Outlet Controls
- DHW Temperature
- Pipe Insulation
- Night Setbacks
- Heat Pumps
- Building Envelope
- Annual Boiler Tuning
- Wall Occupancy Sensors
- Window AC Replacement
- Unit LEDs

### FIVE YEAR SAVINGS

\$343,105

For more information,  
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