

GEATAIN ENGINEERING

CASE STUDY-THE SAINT JAMES BUILDING



BACKGROUND

1133 Broadway, or The Saint James Building, is a historical building that was built in 1896 with an extensive legacy and is now a known landmark. The building is a sister building to 1123 Broadway and shares many of the same utilities. The building was surveyed, and it was found that using antiquated equipment in the building has led to escalating energy consumption. Operators had to manually operate the machinery, indicating there was no building management system (BMS) or controls. There was a lack of insulation around piping networks and the building's envelope, causing temperature leakage. The "cool roof" had a silver coating, qualifying the Local Law 87 standard. An ASHRAE Level II analysis report showed the capital costs and savings, documenting the energy savings plan.

HOW GEATAIN ENGINEERING HELPED

- Identified financial constraints to ensure energy efficiency measures were implemented to meet client budgets.
- Analyzed building operations to determine precise recommendations to improve occupancy comfort, streamline operations, and lower carbon emissions.
- Provided exhaustive evaluation of property infrastructure to reveal hidden savings opportunities.

BENEFITS

- Improved operations of infrastructure subcomponents to align more comprehensive solutions.
- Advanced heating controls show real-time energy usage and historic trends to help identify savings opportunities.



CHALLENGES

- Historical infrastructure and insulation.
- Legacy equipment is severely damaged and lacks insulation.
- Historical routines.
- Lack of advanced heating controls.

SOLUTIONS

- Advanced heating controls.
- Switching to natural gas.
- Installing insulating jackets.
- Air leak sealing.
- Operational strategies.
- Occupancy sensors.
- Reactive power.

EQUIPMENT LIFETIME SAVINGS

\$ 1,466,830

For more information,
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