

# GEATAIN ENGINEERING

## CASE STUDY-139-141 WEST 44<sup>th</sup> STREET



### BACKGROUND

The famous Hudson Theater is located between the Millennium Hotel and Premier Hotel in the heart of Times Square. It is one of the oldest surviving Broadway venues. Built in 1902, it was recently refurbished in 2017. The property manager discussed their historical operations and maintenance practices, which were manual and outdated. Investigating the existing equipment operations and HVAC equipment helped identify the critical equipment for the Targeted Energy Efficiency measures (EEMs). There was antiquated HVAC machinery and an inoperable building management system (BMS). The team spent extensive hours providing strategic solutions to save energy and operating costs for this historical world-renowned theater. The European Building Automation Control (BAC) Factor method was accessed for BMS savings calculation.

### HOW GEATAIN ENGINEERING HELPED

- Streamlined the number of parameters tracked on the BMS system to focus on core operational drivers.
- Input from Property Engineer proved invaluable to streamline assessment, evaluation and recommendations.
- Considered property orientation and shading to refine heat pump capacity design.

### BENEFITS

- Simple operations measures revealed impactful savings.
- Lighting controls allow for seasonal lighting adjustment, following seasonal equinox changes.



### CHALLENGES

- No automated controls; adjustments were all manual, time consuming, and wasteful.
- Inoperable building management system (BMS).
- Antiquated HVAC machinery.

### SOLUTIONS

- Strategic energy saving methods with lighting equipment during performances and after.
- Installation of HVAC equipment.

### FIVE YEAR SAVINGS

\$ 260,000

For more information,  
email [tjm@geatain.com](mailto:tjm@geatain.com)