

Empire State Building

Challenge

BOCA Group is proud to have assisted the elevator upgrade of 70 vertical transportation devices at the Empire State Building. Ownership had decided to renovate the building and its iconic observatory in order to reposition the Empire State Building for the 21st Century, but the elevator and escalator equipment was outdated and inefficient. Challenges included the massive elevator machinery that would need to be disassembled, removed, and replaced with new equipment. The building also has a high volume of workplace occupancy as well as being a major tourist attraction. Any elevator modernization project would need to maintain efficient service in this 102-story landmark for the millions of tenants, visitors, and sightseers that use the elevators each year.

Scope of Work

In collaboration with the Empire State Building's management team, BOCA Group surveyed the existing internal transportation equipment and evaluated the building's vertical transportation goals. In order to perform the most precise and accurate survey of equipment, BOCA Group analyzed the performance, energy efficiency, noise, visitor experience, security, travel speed, ride quality, traffic flow, and scheduling logistics. BOCA Group then designed the modernization project, created performance-based specifications for the necessary upgrades, announced the project bid, and helped the building owner select an ideal partner for the project.

The Otis Elevator Company was selected based on their expertise, technological solutions, commitment, and performance, as well as past history with this building. In addition to a complete refurbishment and modernization of the building's elevators, Otis implemented their advanced Compass™ Destination Management system. Compared to other conventional elevators in modern commercial buildings, the Otis Elevator Company's state-of-the-art system allows for up to 40% faster passenger transportation. One of the most important aspects of this multi-million-dollar energy retrofit project was the improvement of efficiency and the ability to return regenerated energy back into the building grid. Elevators generate electricity when braking against gravity, and now through the use of Otis ReGen™ drives, that energy is being returned to the building's electrical system instead of being wasted, substantially reducing net elevator energy usage.

Results

The vertical transportation upgrade project began in 2010 and is ongoing, as of 2021. The devices were transformed and upgraded with state-of-the-art, energy-efficient Otis Compass systems with ReGen equipment. The project delivered improved speed and passenger experience while contributing to the energy efficiency goals of the overall modernization project.

Throughout the multi-year elevator refurbishing project, BOCA Group acted as an extension of the building's management team and oversaw all aspects of design implementation. As a part of the redevelopment team, BOCA Group facilitated and overcame the challenge of completing the project within a larger building upgrade project. BOCA Group has spent several years coordinating the entire project with Otis, the building's owners, project management firm, security team, and all other involved parties to provide ongoing reports. Our team will continue

to support and consult the client over the next several years. Upon the completion of the project, BOCA Group was honored to have been awarded the Green Power Leadership Award and the LEED® Gold for Existing Buildings.