



PANYNJ: GOETHALS BRIDGE

New York, New York

ESCO CASE STUDY

FSG Enhances Goethals Bridge with Energy-Efficient LED Lighting



Owner

The Port Authority of NY and NJ

Contract Type

ESCO

Contract Amount

\$266,576.00

General Contractor

Constellation Energy

Electrical Contractor

Port Authority Electrical

Cost Savings

\$44,225 a year

Number of Fixtures

Replaced

829

Annual kWh Reduction

266,576 kWh per year

CHALLENGE

As one of the Port Authority's historic bridges, the Goethals Bridge has long been a critical link between New Jersey and New York. To enhance safety, visibility, and energy efficiency, FSG was contracted to design an LED lighting retrofit for the bridge and surrounding facilities. The project included upgrades to roadway lighting, toll plaza illumination, and interior lighting across multiple structures.

SOLUTION

FSG developed a comprehensive lighting plan that replaced outdated 250W HPS roadway fixtures with high-efficiency 83W LED fixtures. Additional upgrades included LED conversions for wall packs, floodlights, canopy fixtures, and explosion-proof lights in fueling areas. Inside the administration building, garage, and maintenance facilities, recessed fixtures and screw-in lamps were also transitioned to LED. FSG supervised mock-up installations and conducted pre- and post-light readings to ensure optimal performance.

RESULT

The results were significant. The new LED system enhanced visibility with an improved color rendering index (CRI) from 22 to 80, dramatically improving clarity and safety. Additionally, the lifespan of the roadway fixtures increased from 24,000 hours to 100,000 hours, drastically reducing future maintenance costs while reinforcing the Port Authority's commitment to modern, energy-efficient infrastructure.

