



# PANYNJ: LINCOLN TUNNEL

Weehawken, New Jersey

## ESCO CASE STUDY

### FSG Upgrades the Lighting at the Lincoln Tunnel

**Owner**

The Port Authority of NY and NJ

**Contract Type**

ESCO

**Contract Amount**

\$4,265,341.00

**General Contractor**

Constellation Energy

**Electrical Contractor**

Facility Solutions Group, Inc

**Energy Firm**

PSE&G

**Cost Savings**

\$641,855 a year

**Number of Fixtures**

Replaced

5,193

**Annual kWh Reduction**

3,070,019 a year

**CHALLENGE**

The Lincoln Tunnel is an approximately 1.5-mile-long tunnel under the Hudson River, connecting Weehawken, New Jersey with Midtown Manhattan. FSG has performed several projects at the Lincoln Tunnel. Phase 1 for PSE&G included replacing the exterior lighting on the Helix on the NJ side, along with the lighting in the Administration Building and shops. Phase 2 for Constellation Energy involved replacing the lights in the three main tubes with LED. Phase 3 for Constellation included additional tunnels, roadway lighting, tower and plaza lighting and bus parking areas.

**SOLUTION**

HID High Pressure Sodium light fixtures were replaced with new LED fixtures. Tower lighting for the plazas had high mounting heights that surrounded residential areas, and special care was taken in fixture selection to control light distribution. Special custom LED fixtures were developed for use in the tunnels, where fixtures are recessed into the walls and are washed weekly. Special architectural lighting was used on the rock walls on the NJ side to create a grazing effect.

**RESULT**

The Lincoln Tunnel is one of the busiest roadways in the world, with more than 120,000 vehicles a day using the roadways. FSG coordinated lane closures and access to provide minimal disruption, while managing to install over 2,400 tunnel lights over a three week period before the Superbowl. New LED provided superior illumination and color rendering over the existing HPS lighting, with more than 50% energy savings. With lamp life increasing more than 400%, maintenance costs were reduced dramatically.

