



NEW JERSEY TRANSIT MMC

Kearny, New Jersey



LIGHTING CASE STUDY

Train Repair Facility Receives New LED Lights With Advanced Controls

CHALLENGE

NJ TRANSIT is the nation's largest statewide public transportation system providing more than 761,000 daily trips on 238 bus routes, two light rail lines and 12 commuter rail lines. It is the third largest transit system in the country with 163 rail stations, 27 light rail stations and more than 17,000 bus stops. The NJT Rail Fleet is cleaned, maintained and repaired at the Meadows Maintenance Complex (MMC). The facility services over 1,100 locomotives and passenger cars a year. When NJT decided the 15-year old HID lighting system was in need of replacement, they chose to increase energy savings, efficiency and operational insight with smart sensor-based industrial IoT.

SOLUTION

(320) 1,000 Watt High Pressure Sodium high bay fixtures and (131) 400 Watt High Pressure Sodium high bay fixtures were replaced with new LED high bay fixtures that consumed 67% less energy. Color improved dramatically in the facility, going from 27CRI yellow light to 70CRI crisp white light. Individual fixtures each utilize a smart sensor that allows task tuning, progressive dimming, and daylight harvesting. Fixtures include advanced power metering to provide energy savings monitoring and validation. A cable network consisting of fiber and Cat 6 with media converters and POE switches form the backbone of the communications network.

RESULT

As shown in the photo above, the visual effect on the lighting upgrade was dramatic. Energy savings of more than 67% have been validated by onboard utility-grade metering. Occupancy sensing and path tracking provide insight into how physical space can be better utilized and monitored while providing additional energy savings

Owner

New Jersey Transit

Contract Type

Lighting

Contract Amount

\$669,124.00

Electrical Contractor

NJ Transit Electrical

Engineering Firm

Facility Solutions Group, Inc

Cost Savings

\$265,102 /year

Number of Fixtures

Replaced

451

Annual kWh Reduction

2,410,018 kWh

