

CASE STUDY



TRANSIT

Holland Tunnel

New York, New York

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our work:



G&G

INDUSTRIAL LIGHTING

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SITUATION

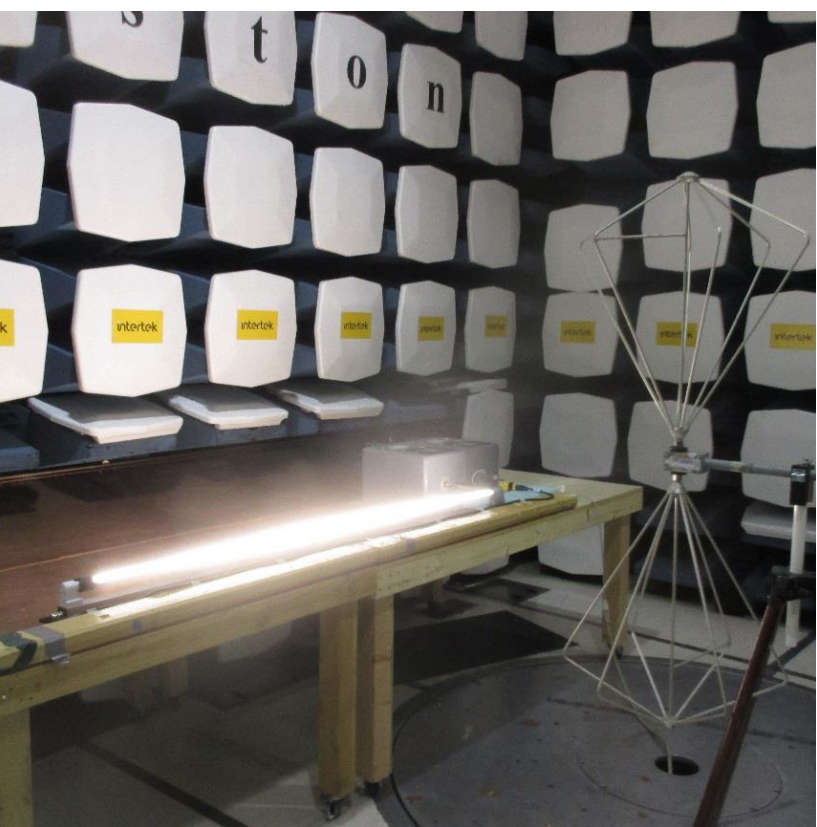
The Holland Tunnel is a vehicular tunnel under the Hudson River in that connects Lower Manhattan in New York City to the east with Jersey City in New Jersey to the west. An integral conduit within the New York metropolitan area, the Holland Tunnel is operated by the Port Authority of New York and New Jersey.



G&G engineer inspecting the installation. Notice the contrast between the newly installed PRX fixtures and the old fluorescents in the background.

CHALLENGE

While trialing LED fixtures in the tunnels in 2013, the Port Authority of NY & NJ discovered that new LED fixtures created electromagnetic interference (EMI) issues within the tunnels, disrupting the performance of radio, cellular, and other vital communications for proper operations. These disturbances presented safety hazards and first-responder delays that could potentially cause injuries and even loss of life. It became evident that the unintentional radio frequency energy radiated from the electronics of the LED fixtures installed posed a serious threat to the communications infrastructure within the tunnel and an EMI-silent solution must be identified.



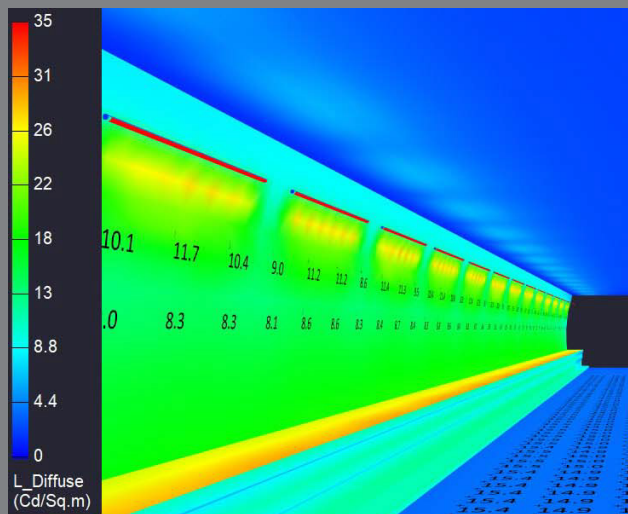
Transit agencies are constantly battling EMI in tunnel and station environments. G&G's EMI silent LED lighting fixtures are a great solution for both NFPA 130 and NFPA 502 environments.

Bradley Rausch
Transit Engineering Consultant,
ShorElectric

G&G's PRX fixtures undergoing MIL-STD-461E RE102 radiated emissions testing.

SOLUTION

G&G Industrial Lighting was approached for their EMI-silent, low-profile fixtures. G&G's fixtures could be placed within close proximity to the radiating cables, which serves as the antennae for their radio communication systems, without interference. G&G's PRX LED fixtures have been installed for the past two years, and The Port Authority of NY & NJ has only reported positive feedback on the G&G fixtures, that solved their EMI problem. PRX is an integrated fixture that retrofits single pin T12 fluorescent lamps.



Pre-install photometric calculations created by G&G applications engineering show that the old fluorescents did not diffuse very much light onto the road.

ACCOMPLISHMENTS



More than doubled the brightness in the tunnel while significantly reducing energy and maintenance costs



Project (including install) paid for by energy savings alone and financed by PSE&G



Drastically reduced maintenance intervals, allowing crews to focus on other tasks



Better road visibility increased driver safety



Platform Retrofit Luminaire

The PRX is a harsh environment rated LED luminaire designed to quickly retrofit fluorescent single pin lamps commonly found on subway and train platforms. Its 1" low-profile design enables PRX to fit seamlessly into existing lamp holders while the direct-AC driverless technology allows complete bypassing of the conventional ballast.

FEATURES THAT MATTERED

- **EMI-Silent:** Direct-AC technology eliminates electromagnetic interference
- **Low-Profile:** Compact 1" housing easily mounts next to cabling
- **Harsh Environment Rated:** Withstands moisture, dust and corrosion
- **Extreme Reliability:** Driverless design reduces risk of failure
- **Extra Long Life:** Rated for 100,000 hour lifetime
- **Replaceable LED Module:** Designed for quick bulb swap
- **"Fixture Lock" Feature:** Anti-rotation mechanism locks fixture in place
- **Engineered for Transit:** Meets NFPA 502 and NFPA 130 standards
- **Buy American Compliant:** Proudly made in the USA



**DIRECT AC
DRIVERLESS**

**10 YEAR
WARRANTY**

Light measurement and light level
confirmation by G&G engineering.

TESTIMONIAL

We have worked with G&G for years in the transit space, and have really grown to appreciate the quality and engineering of their products. The Holland Tunnel project really gave them the opportunity to shine. The AC Driverless design of the G&G product gave us the life expectancy and reliability we needed in such a demanding application. Furthermore, G&G worked closely with our project management team to meet a very tight timeline despite all of the logistical and supply chain issues that were prevalent at the time of the project. From designing a unique solution to solve a problem, to helping to validate performance, all the way to reacting and responding to the many logistical challenges, G&G is hard to beat.

Bernie Erickson

Director of Innovation, Facility Solutions Group



PROJECT DETAILS

OWNER: The Port Authority of NY and NJ

REP: ShorElectric Transit Consultants

GENERAL CONTRACTOR: Constellation Energy

ELECTRICAL CONTRACTOR: Facility Solutions Group

ENERGY FIRM: PSE&G

ENGINEER: Vanderweil and Jacobs

LIGHTING DESIGNER: AWA Lighting Designers

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