RETRO-TECH SYSTEMS

CASE STUDY

WHITE SANDS MISSILE RANGE

White Sands Missile Range (WSMR) is the largest military installation in the United States, with almost 3,200 square miles in area. The missile range is located 27 miles east of Las Cruces, New Mexico, 55 miles west of Alamogordo, New Mexico and 35 miles north of El Paso Texas.

WSMR is a multi-service test range whose main function is the support of missile development and test programs for the Army, Navy, Air Force, National Aeronautics and Space Administration (NASA), other government agencies and private industry.

The Client Challenge

Although energy rates were low, White Sands Missile Range, through the assistance of a Performance Contract from a large National Energy Service Company, elected to upgrade their lighting to more energy efficient technologies with included LED upgrades for fluorescent fixture and T5HO lighting for High Bay lighting. Controls and dimming applications were desired, where applicable.

Over 140 facilities, encompassing over 2.5M square feet, were audited and considered for this lighting project. Due to the type of environment that existed at WSMR, scheduling and security challenges were a part of both the design and installation phases; however, the project goal was to provide an energy efficient Lighting project utilizing the latest in lighting technologies.

The Lighting Solution

Based on the lighting needs and payback opportunities found within the facilities audited, RTS performed lighting retrofits or upgrades to over 9000 fixtures with the addition of new LED lamps or T5HO fixtures. The LED retrofit replaced existing T8 and T12 fluorescent tubes with high quality, mercury free, and more energy efficient lamp, while providing a lifetime rating of 50,000 hours and 5 year warranty. The T5HO fixtures also provided greater efficiency and uniform lighting as replacement to existing HID high-bay fixtures.

The US Made LED tubes run directly of the building line power, allowing for the removal and elimination of the ballast systems currently in place, and as stated above are a very cost-effective, new technology, LED lighting solution.

Occupancy and dimming controls were installed in those areas were for additional savings opportunities would benefit the project, based on usage and application.

The Results

The project results have been well received as the energy savings from the 9000+ fixture retrofitted or upgraded were over $115,000 annually. The technology change for fluorescent to LED and HID to T5HO should provide significant maintenance savings based on the improved hours of operation.

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