Airport Apron Lighting

Musco's Industry-Leading Total Light Control — TLC for LED® Technology

musco Lighting

We Make It Happen®

Leading the Way in Apron Lighting

There's a lot to consider with airport apron lighting. Will glare affect pilots or air traffic controllers? What about maintenance? Will it improve operations? Is it energy efficient?

As the use of LED continues to emerge, it's important to understand that different LED lighting produces vastly different results.

Musco has applied its more than 40 years of research and experience to take advantage of the LED light source in ways no other manufacturer can. The result is an LED system that's created new possibilities for airport lighting.

Improved Visibility

Custom optics provide greater light uniformity, improving visibility and efficiency of ground crews.

Reduced Glare

Patented glare reduction technology eliminates glare from impacting pilots and air traffic controllers.

Total Light Control

Superior light control preserves darkness in areas where light isn't intended.

Streamlined Maintenance

Remote electrical enclosures eliminate the need for lifts to service and removes weight from the poletop.

Longer Reliability

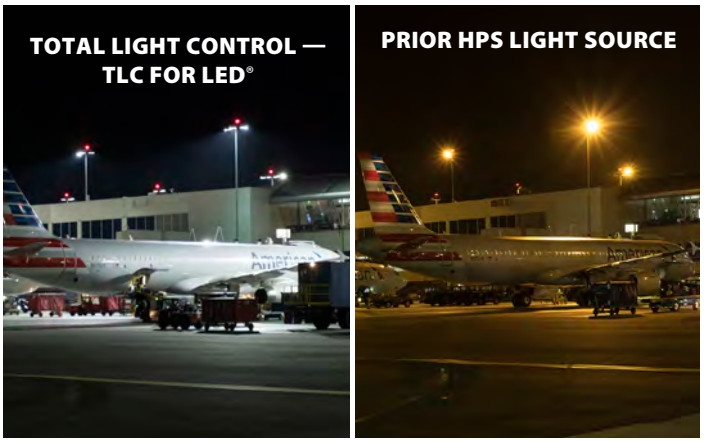
System solution with lighting, electrical, and structural components designed to work together for long-term reliability.

System Adaptability

Interfaces with new or existing facility management systems, along with adaptive controls based on gate usage.

No Maintenance Costs

A comprehensive 10-year parts and labor warranty eliminates maintenance costs and headaches for the next decade.



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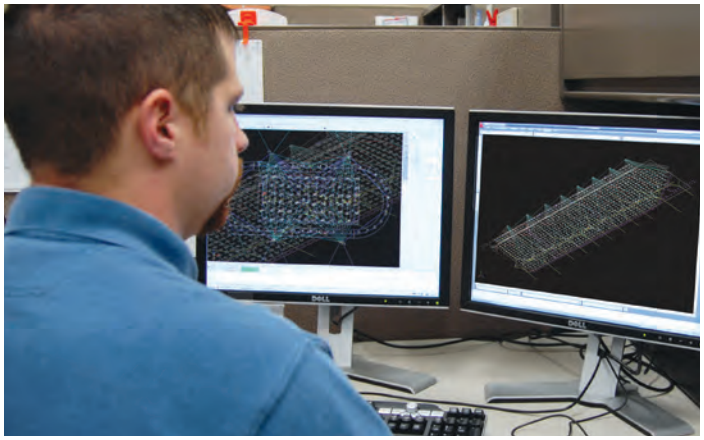


An Ideal New or Retrofit System Solution

Whether installed as a retrofit or foundation to poletop solution, Musco's LED apron system is factory aimed, wired, and tested for easy installation and trouble-free operation.

And for your peace of mind, both are backed by a long-term parts and labor warranty—supported by a 160-member service team—eliminating maintenance costs for 10 years.

Foundation to Poletop System

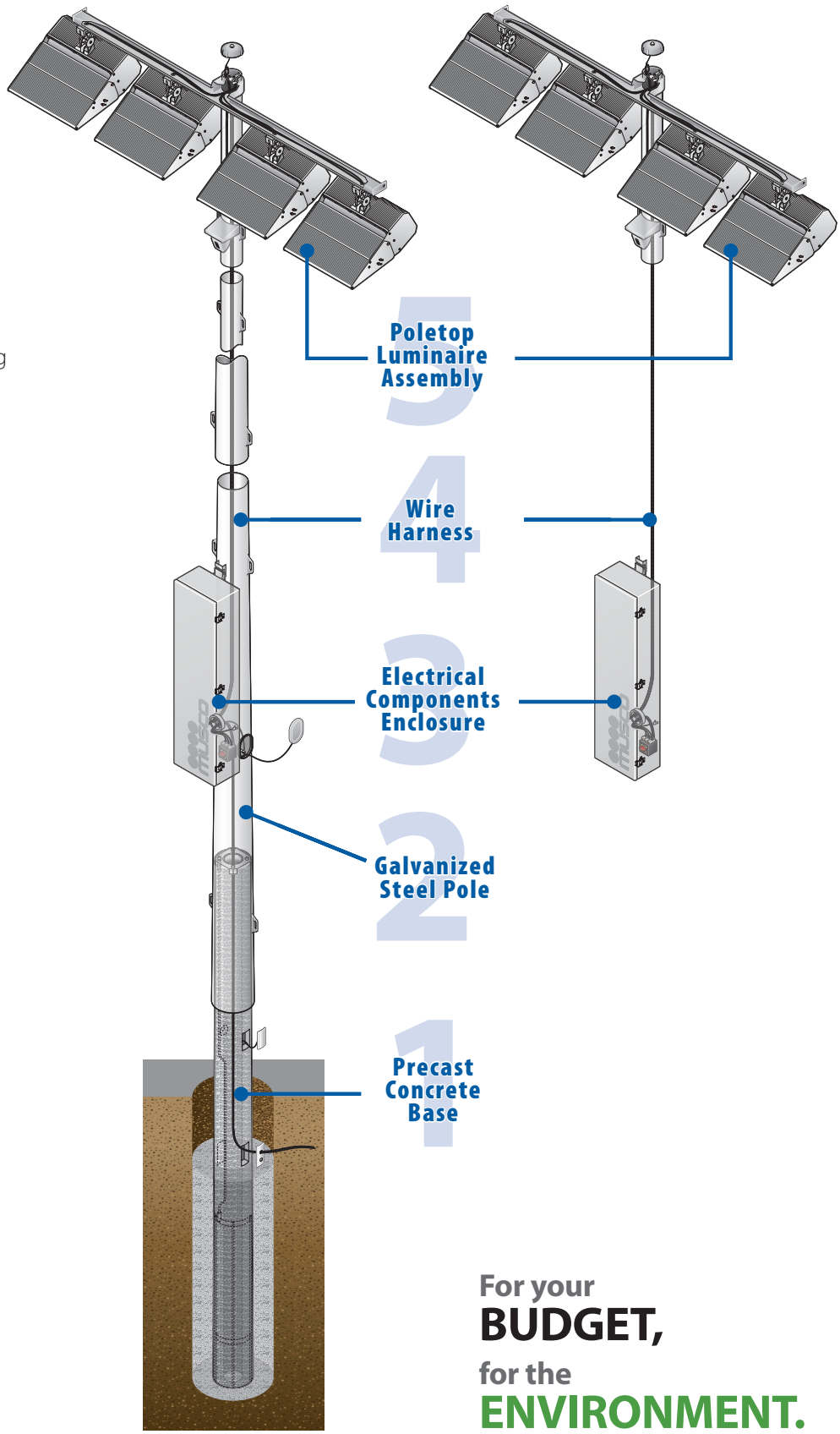
5 Easy Pieces™ from foundation to poletop includes lighting, electrical, and structural components designed to work together and a small structural footprint to maximize available area around the poles.

Retrofit System

New cross arms for structural integrity, new wire harnesses to ensure no exposed wiring and solid connections with quick-connect plug-ins, mounted to existing poles.

Foundation to Poletop Solution
Light-Structure System™

Retrofit Solution



For your
BUDGET,
for the
ENVIRONMENT.

McCarran International Airport (LAS)

Las Vegas, Nevada, USA

The Challenge

As the eighth busiest airport in the U.S., McCarran International Airport (LAS) serves more than 47.4 million passengers each year. LAS is located just five miles from the iconic Las Vegas Strip and hosts more than 30 airlines that provide non-stop service to more than 130 destinations. The airport's existing high-press sodium (HPS) lighting created numerous problems such as high-energy usage, constant repairs, poor color rendering, and disruptive glare for pilots, ground crews, and air traffic controllers.

The Solution

Musco's team of engineers designed a customized solution using its Total Light Control—TLC for LED technology retrofitted onto the airport's existing poles. The new system is designed to improve energy efficiency, eliminate maintenance, enhance visibility, and provide a complete system solution for the retrofit application.

The Result

Easy Installation — The system was factory aimed, wired and tested to ensure quick installation without disrupting regular operations at the airport

Energy Efficiency — The airport cut energy consumption by 54 percent, representing a $1.1 million savings over the next 10 years

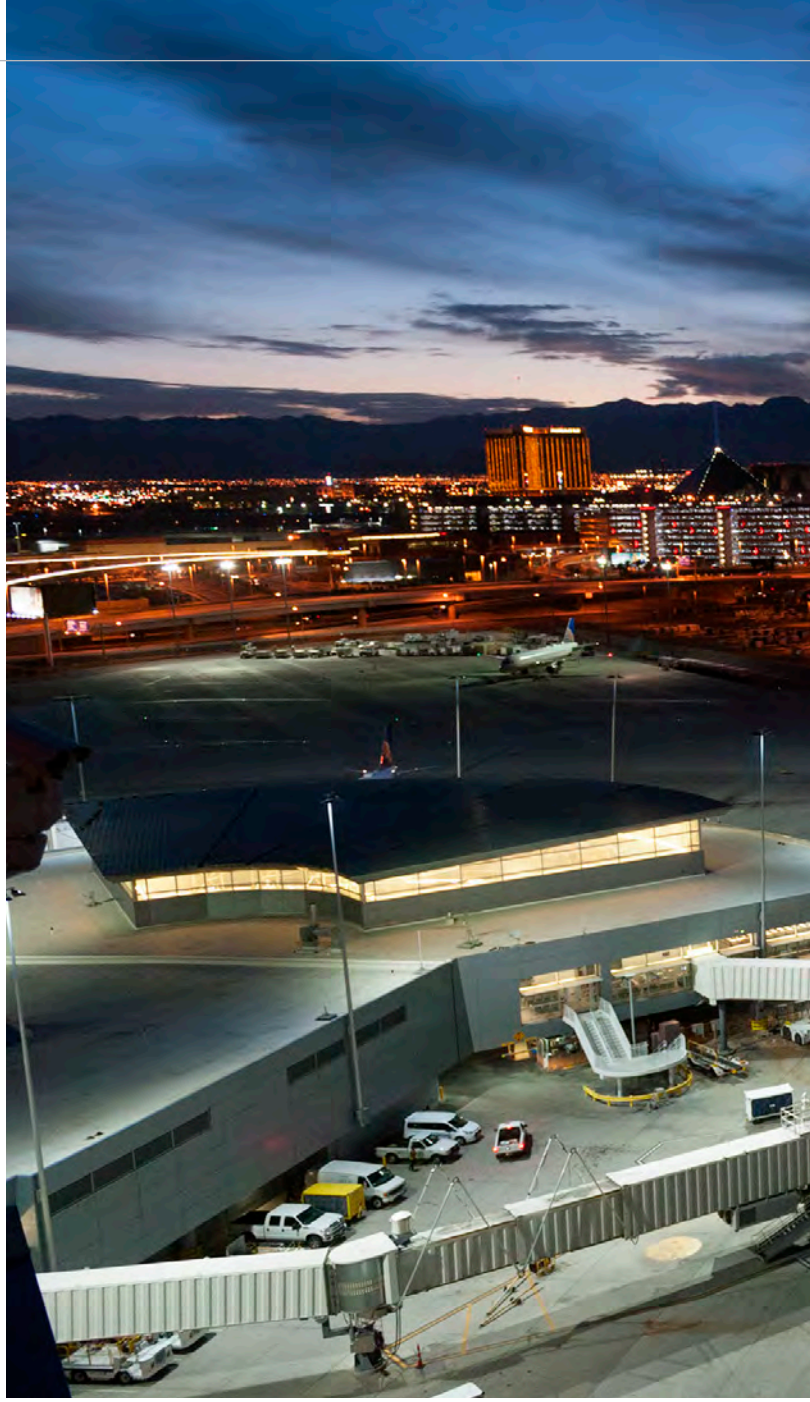
Visibility — The improved light quality and reduced glare help ground crews see packages and direct planes more effectively

System — The new system is custom designed to adapt to the airport's existing poles, including new mounting brackets, LED fixtures, and wire harnesses

Zero Maintenance — A 10-year parts and labor warranty eliminates maintenance costs and concerns over the next decade

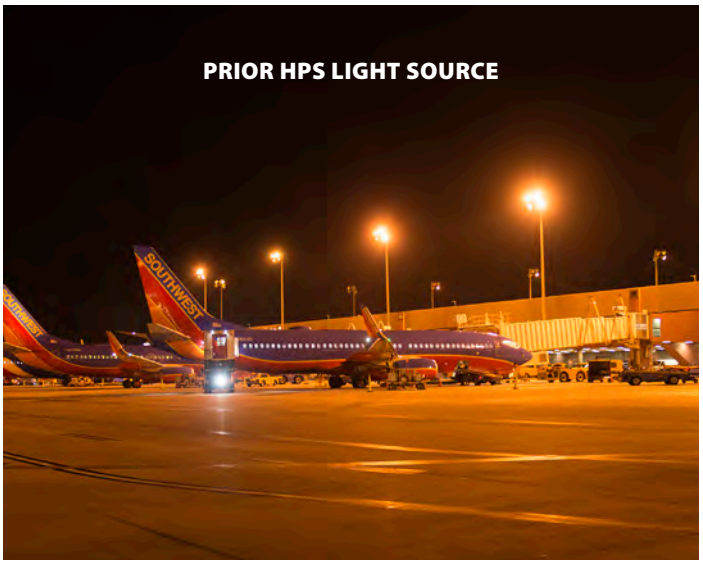
$1,300,000

10-year operating savings



"The Musco team was great to work with from the beginning. They provided all of the engineering and backup documents we needed to ensure their system would exceed the design requirements. The new lights provided better light level coverage, reduced glare, and reduced wind loading on existing poles and foundations."

- Dustin Colwell, Engineer, Kimley-Horn and Associates, Inc.



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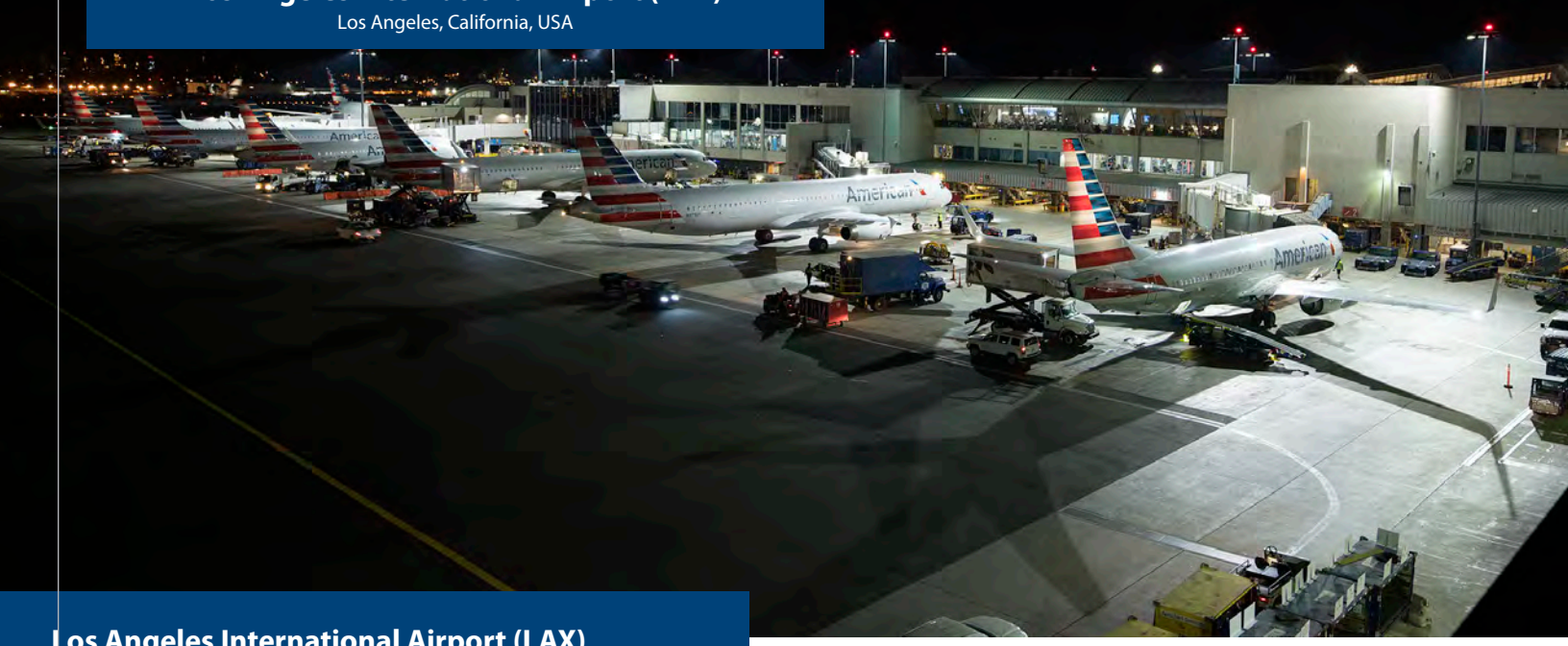
Los Angeles International Airport (LAX)

Los Angeles, California, USA



Los Angeles International Airport (LAX)

Musco's custom-designed retrofit LED system has dramatically enhanced operations for pilots, air traffic controllers, and ground crew while reducing energy consumption at Terminal 4 of LAX, the third-busiest airport in the world.

Midland International Space & Air Port (MAF)

By increasing light levels, virtually eliminating glare, and eliminating maintenance which had become an increasing problem with the previous lighting, Musco's LED apron lighting system has significantly improved operations at MAF.

Midland International Space & Air Port (MAF)

Midland, Texas, USA

Project Installations: Airports

Atlantic City International Airport
Egg Harbor Township, New Jersey, USA

Bagram Airbase
Bagram, Afghanistan

Bradley Air National Guard Base
East Granby, Connecticut, USA

Bristol Airport
Bristol, Southwest, U.K.

Cape Town International Airport
Western Cape, South Africa

Creech Air Force Base
Indian Springs, Nevada, USA

Des Moines International Airport
Des Moines, Iowa, USA

Don Mueang International Airport
Bangkok, Thailand

Elizabeth City Regional Airport
Elizabeth City, North Carolina, USA

Fort Lauderdale – Hollywood International Airport
Fort Lauderdale, Florida, USA

Francis S. Gabreski Air National Guard Base
Westhampton Beach, New York, USA

Fuzhou Changle International Airport
Fuzhou, Fujian, China

Gila Bend Air Force Auxiliary Field
Gila Bend, Arizona, USA

Gladstone Airport
Gladstone, Queensland, Australia

Joint Base Andrews
Andrews Air Force Base, Maryland, USA

L.F. Wade International Airport
St. George's GE CX, Bermuda

London Southend Airport
Southend-on-Sea, Essex, U.K.

Los Angeles International Airport
Terminal 4
Los Angeles, California, USA

Luke Air Force Base
Luke Air Force Base, Arizona, USA

McCarran International Airport
Las Vegas, Nevada, USA

Midland International Air & Space Port
Midland, Texas, USA

Minneapolis-Saint Paul International Airport
Minneapolis, Minnesota, USA

Ottumwa Airport
Ottumwa, Iowa, USA

Palm Beach International Airport
Signature Apron
West Palm Beach, Florida, USA

Palm Beach International Airport
Tarmac
West Palm Beach, Florida, USA

Palm Beach County Glades Airport
Pahokee, Florida, USA

Pittsburgh International Airport
Pittsburgh, Pennsylvania, USA

Quebec City Jean Lesage International Airport
Quebec City, Quebec, Canada

Rockford International Airport
Rockford, Illinois, USA

Roman Tmetuchl International Airport
Airai, Palau

San Jose International Airport - Signature
Apron
San Jose, California, USA

Seattle-Tacoma International Airport
Seattle, Washington, USA

Seymour Johnson Air Force Base
Goldsboro, North Carolina, USA

Signature FBO King County
Seattle, Washington, USA

Sioux Fall Regional Airport
Sioux Falls, South Dakota, USA

Sky Harbor International Airport
Phoenix, Arizona, USA

Space Coast Regional Airport
Titusville, Florida, USA

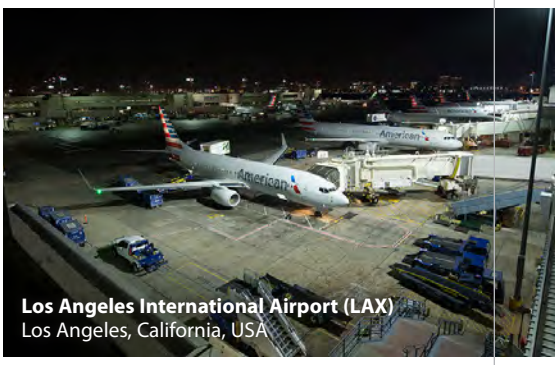
Springfield Air National Guard
Springfield, Ohio, USA

Stewart Air National Guard Base
Newburgh, New York, USA

Vancouver International Airport
Vancouver, British Columbia, Canada

Xiamen Gaoqi International Airport
Xiamen, Fujian, China


Vancouver International Airport (YVR)
British Columbia, Canada



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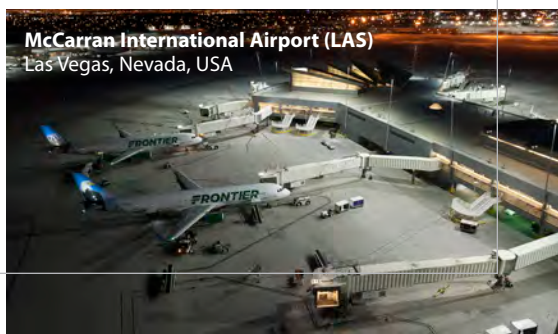

McCarran International Airport (LAS)
Las Vegas, Nevada, USA

"The design, efficiency, and coverage of the lighting system easily met and exceeded our expectations. The product is exceptionally reliable and vivid. Our tenants routinely express their gratitude for the superb end result of the project."

- Justin Millican, Deputy Director of Airports and Security Coordinator, Midland International Air & Space Port

"As we embarked on this project, the primary goals for McCarran were to maximize energy savings while increasing lighting and visibility with minimal glare. The Musco system allowed us to achieve just that."

- James Christley, Deputy Director of Aviation, McCarran International Airport

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www.musco.com
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