THE SAN FRANCISCO-OAKLAND
BAY BRIDGE SEISMIC SAFETY PROJECTS
CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

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PRESS RELEASE

HIGH-TECH LIGHTS ILLUMINATE NEW EAST SPAN

Innovative Lighting Reduces Glare, Saves Energy, Looks Beautiful

Oakland, July 26, 2012 – A state-of-the-art lighting system will enhance the functionality and aesthetics of the San Francisco-Oakland Bay Bridge's new East Span. The light poles were designed by Moffat & Nichol and fabricated by Nebraska-based Valmont Industries, which has fabricated light standards for the Panama Canal and the Dallas Area Rapid Transit. Custom-made light fixtures were designed and fabricated by Iowa-based Musco Sports Lighting, which lights Yankee Stadium and the White House.

Featuring light-emitting diodes (LEDs) with cutting-edge light poles and fixtures, the lighting system will provide a uniform, even wash of light across the roadway. The fixtures are positioned to project light in the direction of travelling vehicles – much like headlights on a car – placing a high volume of light on the road while protecting motorists from light pollution and glare. The LEDs will be in use for 10 to 15 years before being replaced, and while outlasting standard lights by eight to 13 years, they use about half the energy.

The roadway will be lit by 273 light poles with a total of 1,521 fixtures; each fixture houses 25 to 50 LEDs for a total of more than 48,000 LEDs in the system. Erection and installation of each pole and fixture takes approximately two hours. Using a large number of individual LEDs with individual optic control allows for greater control over the direction of the light, creating the ability to place more light where it is needed and remove light from where it is not. The massive steel light poles range in size from 23 to 65 feet in height and from 2,500 to 7,500 pounds.

The lighting system will be as aesthetically pleasing as it is functional. The poles and fixtures were designed by collaborative teams, including Caltrans engineers and architects, to create lights that reflect the look of the Self-Anchored Suspension Span's single tower, with faceted corners on each pentagonal pole and a wide base that tapers as it rises. This will connect the various spans of the bridge with a look of balance and uniformity. The original lighting design was conceived by Howard Brandston, then later developed to LEDs by Caltrans, Zoon Engineering and Parsons Brinckerhoff, and placed by Bleyco Inc.

While improving safety for motorists who drive on the bridge, the lights also help protect maintenance workers, who will spend less time working near live traffic during light replacement operations. The system's longevity also improves motorists' experience by reducing the amount of lane closures that will be necessary to provide access for maintenance.

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