

PHILIPS

Case Study

Connected LED
lighting system

Bridge architectural lighting

Jacques-Cartier Bridge, Montréal, Québec, Canada

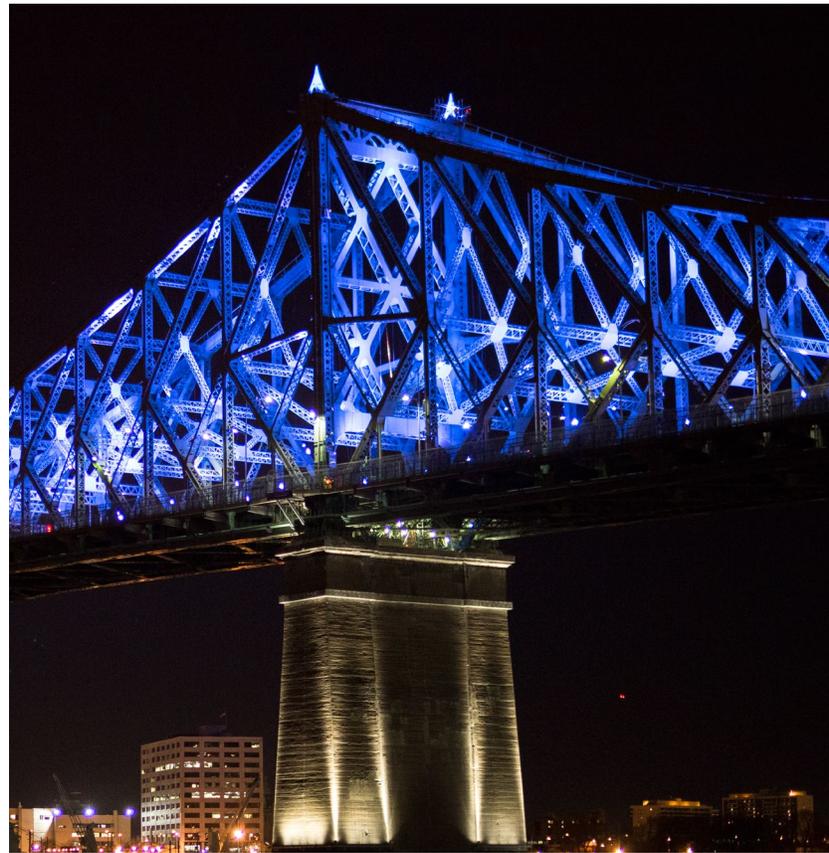
Mirroring the heartbeat of the city

Photography provided by
Moment Factory © 2017
Montréal, Québec, Canada

Reflecting the energy and pulse of the city



An iconic structure of the Greater Montréal landscape, Canadians have been using the Jacques-Cartier Bridge to cross the Saint Lawrence River for over 87 years. The five-lane steel bridge serves as a gateway between the city of Montréal and its southern suburbs and with 98,000 vehicles traversing it every day, it is the third busiest bridge in Canada. The bridge spans over 3,350 m (11,000 ft) and is best known for the eight finials, or architectural ornaments, that sit atop its four main columns and resemble the Eiffel Tower.



Already an unmistakable landmark viewed by thousands during the day time, the bridge now illuminates the night sky with a Philips LED lighting system. The bridge was lit for the first time in its history as part of the Living Connections project to help commemorate both the 375th anniversary of Montréal and 150th anniversary of Canada.

A true collaborative showcase of both Montréal's artistic vision and engineering talent, the Living Connections project was realized thanks to the 200+ people of varying professions ranging from creatives and lighting designers to steel workers and traffic officers who worked on the project. The multimedia entertainment studio Moment Factory served as the project's creative lead with help from six local Montréal design studios, while Jacques Cartier and Champlain Bridges Incorporated (JCCBI), engineering consortium WSP-AECOM, and construction company Pomerleau handled the structural side.

The idea behind the project is for the Jacques-Cartier Bridge to reflect the energy and pulse of the city in real time through the use of over 2,800 intelligent LED lights attached to the steel truss structure. Philips supplied the interactive lighting for the "digital skin" of the bridge with 2,400 iColor Accent Powercore fixtures. Each evening, as the sun begins to set on Québec's metropolis, the lights awaken and bring the bridge to life with vibrant colors and animations. Throughout the night the lights on the exterior of the bridge respond to Montréal's energy by creating patterns using colors, intensity, and motion based on the frequency 'Montréal' is shared on social media. In effect, these patterns mirror the heartbeat of the city and make it the first People Connected Bridge.

Project Statistics



Economy:

- 25,000 hours of local creative designers



Experience:

- 1800 unique lighting shows per year¹



People:

- 98,000 motorists per day travel the bridge²



Social Media:

- >10M impressions expected³



Connectivity:

- 95,000 addressable pixels

¹ Based on 5 hourly shows per night x 365 days per year.

² Wikipedia

³ As per Economic Impact Study by Boyette Strategic Advisors www.philips.com/measuringimpact

“When working on the historic city of Montréal's most visible architectural icon, our client and team of designers set demanding environmental, aesthetic and connectivity performance criteria. Philips Color Kinetics LED Lighting system was a top choice for us to illuminate the dynamic exterior digital "skin" component of the bridge due to its weather and vibration resistance and long life span. Its excellent resolution and dimming attributes were key for the designer team to tell the living story of our city, our seasons and our people.”

– Gabriel Pontbriand,
Moment Factory Senior Creative Director and Lighting Designer

Philips Lighting solution overview



Philips Product

Philips Color Kinetics
iColor Accent MX Powercore

Project Credits

Client: Jacques Cartier and Champlain
Bridges Incorporated (JCCBI)

Lighting Designer: Moment Factory
Ambiances Design
Productions
ATOMIC3
Éclairage Public / Ombrages
Lucion Média
Réalizations
UDO Design

General Contractor: Pomerleau

Electrical Contractor: Systèmes Urbains

Engineer: Consortium WSP-Aecom

Electrical Distributor: Lumen - division
Sonepar Canada

After the creative vision was decided upon, WSP-AECOM began work in the fall of 2015 to conduct biological, physical, and human impact assessments to ensure that the lighting system would fit harmoniously within the existing natural and urban environments. The lighting system was installed by Pomerleau the following fall and was completed in the spring of 2017.

The bridge opened with great fanfare on May 17, 2017 with a special inaugural celebration including an inspiring symphonic arrangement played by Montréal's renowned Orchestre Métropolitain accompanied by a dynamic light show showcase in a short capsule the unprecedented programming features of the lighting system.



Philips Color Kinetics iColor Accent MX Powercore

iColor Accent MX Powercore is a direct view linear LED fixture ideally suited for creating long ribbons of color and color-changing effects. Variable resolution offers the precision to display large-scale video, graphics, and intricately designed effects in a host of architectural, retail, and entertainment settings.

For more info on the product: www.colorkinetics.com/ls/rgb/accntmx/

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