

Jacobs Arup JV and Transport Scotland Deliver Queensferry Crossing

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Royal opening of largest infrastructure project in Scotland for a generation

DALLAS--(BUSINESS WIRE)-- **Jacobs Engineering Group Inc.** (NYSE:JEC) and **Arup** celebrate the official opening of the Queensferry Crossing by Her Majesty The Queen. The Jacobs Arup Joint Venture (JV) has worked with Transport Scotland since 2007 to develop and manage the Forth Replacement Crossing project in the east of Scotland. The Scottish Government investment of over £1.3 billion (\$1.6 billion) comprises the new Queensferry Crossing, the longest three-tower, cable-stayed bridge in the world and 22 kilometers (13.7 miles) of major motorway upgrades to the cross-Forth transport corridor.

This Smart News Release features multimedia. View the full release here:

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©Transport Scotland. The Queensferry Crossing bridge is the longest three tower cable-stay bridge in the world. (Photo: Business Wire)

The Jacobs Arup JV co-located with Transport Scotland as an integrated Employer Delivery

Team, initially in Transport Scotland's office in Glasgow in 2008, and onsite since 2011, to develop and manage the entire project. As Transport Scotland's lead consultant and delivery partner for construction, the Jacobs Arup JV's 1,400 global staff provided more than 1.6 million work hours.

"Transport Scotland set out to dramatically enhance user experience and improve accessibility in the region, and the Queensferry Crossing now provides a sustainable and intelligent connection which future generations can enjoy," said Jacobs Buildings and Infrastructure Senior Vice President Bob Duff. "The project has been a tremendous

collaboration of diverse talent and proficiency in an often challenging environment. We're impressed with the sheer effort of all involved to deliver this world-class engineering structure."

"The Queensferry Crossing has been designed to complement its unique setting on the Firth of Forth," explained Dr. Mike Glover OBE, Arup Technical Director on the Queensferry Crossing project. "There is an effortless elegance to the bridge's distinctive overlapping cabling system which disguises the amazing feat of engineering it represents. The crossed cables create a structure of such strength that the towers and deck are able to be as slim as feasible, producing a slender silhouette."

The integrated "managed crossing scheme," pivotal to the project's viability and ultimate user experience, enables the Forth Road Bridge to continue to be used as a public transport corridor. This, combined with the innovative cable design and the implementation of Intelligent Transport Systems (ITS), reduced the need for significant expansion of the existing road network, allowing the overall scheme budget to be reduced by over £2 billion (\$2.5 billion). The Jacobs Arup JV also provided guidance into the design of the bridge's cable-stayed solution, which allows individual strands within each cable to be replaced if required without the need to close the Queensferry Crossing. Wind shields and a structural health monitoring system have been implemented to help enhance reliability.

The Jacobs Arup JV scope included scheme definition, sustainable bridge strategy, highway and environmental design, statutory process, procurement, project management and construction support. Staff skill sets spanned traditional engineering, structural health monitoring, environmental consulting, wind engineering, ship impact studies, stakeholder engagement and BREEAM (Building Research Establishment Environmental Assessment Method) building portfolio management, together with road infrastructure design and ITS.

Jacobs is one of the world's largest and most diverse providers of full-spectrum technical, professional and construction services for industrial, commercial and government organizations globally. The company employs over 54,000 people and operates in more than 25 countries around the world. For more information, visit www.jacobs.com.

Arup is the creative force at the heart of many of the world's most prominent projects in the built environment and across industry. From 92 offices in 40 countries our 13,000 planners, designers, engineers and consultants deliver innovative projects across the world with creativity and passion. For more information, visit www.arup.com.

Statements made in this release that are not based on historical fact are forward-looking statements. We base these forward-looking statements on management's current estimates and expectations as well as currently available competitive, financial and economic data. Forward-looking statements, however, are inherently uncertain. There are a variety of factors that could cause business results to differ materially from our forward-looking

statements. For a description of some of the factors which may occur that could cause actual results to differ from our forward-looking statements please refer to our Form 10-K for the year ended September 30, 2016, and in particular the discussions contained under Items 1 - Business, 1A - Risk Factors, 3 - Legal Proceedings, and 7 - Management's Discussion and Analysis of Financial Condition and Results of Operations. We do not undertake to update any forward-looking statements made herein.

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