## UNDERGROUND LUNCH&LEARN PORT OF MIAMI TUNNEL: CONSTRUCTION, DESIGN AND INNOVATIONS

The Port of Miami Tunnel project is a highly complex project that includes design, build, finance, operation and maintenance. This project is a 35year concession agreement between the Florida Department of Transportation (Owner) and MAT Concessionaire, LLC (Concessionaire), which includes 55 months for design and construction being carried out by Bouygues Civil Works Florida (BCWF). Jacobs Engineering is the Engineer of Record for the tunnel, as a sub-consultant to BCWF.

The main tunnel structure consists of two 37-foot internal diameter bored tubes running east to west with four connecting cross-passages, each 15 foot in diameter and ranging from 15' to 75' in length. The eastbound and westbound bored tunnels are 3,700' and 4,000' long, respectively. The bored tunnel lining consists of two-foot thick universal precast segments with flat joints. The tunnel is being designed for a 150-year life. A closed-face shield machine, with earth/fluid pressure balance technology, was used to construct the tunnel.

## NOVEMBER 1, 12-1 P.M. BERTHOUD HALL 243

**Nick Chen** is Regional Vice President and Chief Tunnel Engineer of Jacobs Engineering North America Building and Infrastructural Group. He is the Tunnel Engineer of Record for the two recent US underground P3 projects, including The Port of Miami Tunnel project and The Ohio River Bridge East End Crossing Tunnel project.

Eastbound Tunnel Boring Machine Breakthrough



Professional Associations include: Executive Committee Member, UCA of SME, 2006 to 2008; Chair, New Austrian Tunneling Method (NATM) Committee of Underground Construction Association (UCA) 2007-2008; Director, Board of Directors, American Underground Association (AUA) 2005 to 2009; Chair, New Austrian Tunneling Method (NATM) of

AUA, 2005 to 2006; and Committee Member, ACI Committee 506, Shotcreting.







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