



GEOTECHNICAL ENGINEERING STUDENT ORGANIZATION AT UIUC

Epic Fail- Shedding Light on Underground Risk

Rory Ball & Michael Vitale

Monday, April 11, 2016

5:00–6:00 pm – 1311 Newmark CEE Building



Several recent tunnel projects will be covered, including how geotechnical risks were identified and mitigated (or not) through the design effort. Results during construction will be compared with expected outcomes. Projects include: the micro tunnel that almost blew up Southern California; a shaft that also doubles as a very deep swimming pool; and a collapsed building in New York that supplied ducks to all of the local Chinese restaurants (police suspect ‘fowl’ play).

Mr. Ball’s experience includes planning, design, resident engineering, and project management roles on a wide variety of tunnel and underground construction projects. He has in-depth knowledge in the areas of contract document preparation, trenchless construction, conventional tunnel excavation, TBM tunneling, pressurized face tunneling, portal design, and shaft and tunnel initial support design. Mr. Ball leads a diverse working group of trenchless experts for the tunnel practice within HMM. His worldwide experience includes projects in a dozen U.S. states, Canada, Japan, and New Zealand and includes tunnels in soft mud with zero blow count, to extremely abrasive soil with abundant cobbles and boulders, to glacial till, to a variety of hard rock types.

Mr. Vitale has extensive worldwide experience in the underground industry. His areas of expertise encompass soil and rock engineering, hand-mined and TBM tunnels, pressurized-face tunnels, tunnel and shaft lining systems including segmental linings, micro tunnels, and other underground construction/braced excavations. He has served as Design and Project Manager on some of the largest CSO tunnel projects in the United States and Southeast Asia. Several of these projects have won international awards and recognition for innovations in tunnel methodology, lining design and drop shaft design/construction. Mr. Vitale is a frequent author/presenter at national tunnel conferences and is active on many national technical committees and organizations. He recently authored Chapter 7- “Wastewater Tunnels” in The History of Tunneling in the United States and was one of the primary authors of the ASCE Standard Guideline for Micro tunneling.