

CEE 595F – Geotechnical Seminar – ONLINE

Friday, December 4, 2020 | 11:00am Central Time on Zoom



Parallel Thimble Shoal Tunnel and Hampton Roads Bridge Tunnel

Challenges, Opportunities and Lessons Learned

Dave Watson, P.E.
Mott MacDonald

Speaker Bio: Mr. Watson has 19 years of civil, structural, and geotechnical engineering design, tunnel inspection, rehabilitation design, and construction site experience on a variety of projects. This experience includes jacked tunnels, TBM- driven tunnels, segmental lining design, microtunnels, sprayed concrete lined shafts and tunnels, diaphragm (slurry) wall shafts and portals, caisson sinking, and cut-and-cover tunnels. Mr. Watson has experience with various procurement methods including traditional design-bid-build and design-build.

Abstract: Two Design/Build Tunnels are currently being built under the Chesapeake Bay near Norfolk Virginia. These highway tunnels, approximately 40 feet in diameter, will supplement the existing immersed tube tunnels and ease congestion on these heavily traveled sub-aqueous roads. While both tunnels have a different owner and a different consortium of contractors, Dragados is the lead Contractor on both, and Mott MacDonald is the tunnel designer for both projects. Mr. Watson will discuss the challenges of performing a geotechnical exploration program on the ocean, as well as the work required to construct island expansions from which to stage the



work. Key aspects of design will also be featured including measures taken for buoyancy, segmental liner design issues, soft marine sediment challenges and settlement concerns due to large scale filling and tunnel construction immediately adjacent to existing facilities.