

Day One - Track Two

Wednesday, March 21st, 2018

1:30 p.m. – 2:00 p.m.

How a Contractor Obtained Approval for an Innovative Low Impact Design of Temporary Creek Crossings Post-Tender

Presenters: Matthew Pickett, Groundwater Environmental Management Services Inc. and Seamus Tynan, Ward and Burke Microtunnelling Ltd.

Biography

Mr. Pickett has over 7 years of experience as an Environmental Consultant. As the Monitoring Team Lead at GEMS, Mr. Pickett has been involved in various pre-construction environmental site assessments, development of comprehensive environmental monitoring programs and conducted numerous site inspections on active construction projects on behalf of both public and private sectors. Mr. Pickett has developed a strong and positive relationship with government agencies and contractors throughout all of his past projects, and continues to perform his inspection and management duties in a detail oriented manner conducive to project timelines. He brings creative and unique environmental solutions to address problems encountered on site and has developed collaborative working relationships with regulatory agencies, contractors and engineers. He has broad knowledge on sampling techniques and all aspects of monitoring procedures including environmental spill responses.

Mr. Seamus Tynan is a native of Ireland and graduated from Napier University, Scotland in 2002. He spent 3 years in the UK before emigrating to Canada in 2005. Mr. Tynan has spent all of his career in tunneling and is well experienced in all forms of conventional tunnelling ranging from conventional tunnelling through to microtunnelling. He has worked on multiple well known projects across the GTA and Canada. Registered Professional Engineer in Canada and Chartered Engineer in Ireland.

Abstract

Ward and Burke Microtunnelling Ltd. (W&B) was the contractor for a sanitary sewer project involving the installation of new infrastructure and the relocation of existing infrastructure. Groundwater Environmental Management Services (GEMS) worked with W&B as the Environmental Manager on site. Within the scope of this project, four temporary creek crossings to cross Mimico Creek were planned and approved. Often when working on projects that involve creek crossings the typical methods used are creek bypass, tunnelling or installation of box culverts; all of which carry various risks and challenges. In this case the original intent was to install 3600mm x 3600mm concrete box culverts at each of the four crossings. As the contractor, W&B assessed the plans on site and determined that it would be more beneficial with fewer impacts to the creek to install flumes instead of box culverts at two of the four creek crossing locations. The Region was open to implementing the changes provided and W&B took the lead to obtain the necessary permits with the Conservation Authority and manage the risk. This presentation will discuss project scope and scale, proposed changes and the associated reasons, working process with the Conservation Authority to obtain the new permits, the changes to the ESC plans and monitoring associated with the fluming method to mitigate the risks as well as share final results including how the project stayed on schedule.

Learning Objectives

1. How innovative Low-Impact Design can be initiated even at the post-tender stage and be cost-effective;
2. Importance of openness to alternative solutions within a public procurement framework; and
3. Working with transparency with all parties to achieve project objectives and minimize risk to the environment.