BALANCING TECHNOLOGY AND THE ENVIRONMENT

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Abstract:

Over the last 3 years, some 30% of the capital construction budget for tunnelling projects in York Region has been spent on the Environment. This runs the gamut of:
• post construction environmental enhancements directly or indirectly related to the project
• intensive, focussed environmental monitoring beginning with preliminary design, design, pre, during and post construction – literally years of monitoring
• specific environmental considerations for areas of concern to Conservation Authorities and the Ministry of the Environment as well the Ministry of Natural Resources and Fisheries and Oceans Canada
• construction methodologies that are respectful of the environment above and below ground
• adherence to new and proposed legislation geared to the protection of groundwater resources, lakes and rivers, ecosystems and greenspace.

With tunnelling fast becoming the construction method of choice and earth pressure balance specifically growing in favour with the ability to tunnel through water bearing soil, York Region's expanding linear sewage infrastructure performs the multiple purposes of:
• build once to ultimate demand
• spill protection by use of gravity tunnels which do not require pressure
• redundancy with existing trunk systems
• potential for in-line storage and attenuation against peak flows from increasingly unpredictable rain events.

Keywords: tunnelling and environment link; York Region; Oak Ridges Moraine; York Durham Sewage System (YDSS); slurry wall shaft; 19th Avenue Interceptor

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