ONTARIO SOCIETY OF PROFESSIONAL ENGINEERS

February 27, 2015

Councillor Gord Perks
Toronto's Subcommittee on Climate Change Mitigation & Adaptation
100 Queen Street West, Suite A14
Toronto, ON M5H 2N2

RE: TORONTO'S SUBCOMMITTEE ON CLIMATE CHANGE MITIGATION & ADAPTATION

Dear Councillor Perks,

The Ontario Society of Professional Engineers (OSPE) is a member-interest, advocacy organization. We are the voice of the province's engineers, supporting, representing and advancing their interests and promoting engineering excellence for the benefit of the public. We represent engineers who work in several of the most strategic sectors throughout Ontario.

OSPE commends the City of Toronto for establishing this subcommittee to provide key leadership to address one of the most pressing issues of our time – climate change. We further applaud Toronto's dedication to position itself at the forefront, both throughout the province and across the country, in crafting forward-looking, solution-based strategies to reduce carbon emissions. Eighty per cent of the nearly 65 strategies have been initiated from the *Climate Change Action Plan*, which can be viewed as a substantive measure of Toronto's commitment to this issue. However, we recognize that while emissions are decreasing, the combination of economic and population growth means that Toronto is at a critical juncture with respect to taking further decisive action to confront the effects of carbon emissions. OSPE can assist the city in these efforts as we are comprised of multi-faceted experts that can provide advice on how to improve public policy in this area.

Engineers serve on the front lines of safeguarding and maximizing investments in infrastructure. It is our responsibility to design, build, and operate systems that are resilient to the environments in which they operate, while meeting our obligation to protect the public's health and safety in the process.

The impacts of carbon emissions obviously do not operate in a silo and, instead, present challenges for many aspects of city planning. For that reason, OSPE encourages Toronto to take an expansive approach to combating this issue, and our organization's multi-disciplinary engineering knowledge positions us to help.

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One area of particular concern is the intersection between climate change and infrastructure. Building and maintaining infrastructure must be done by carefully considering future environmental impacts so as to not incorporate vulnerabilities that will later cause service disruptions and failures. Consequently, we need to ensure that codes, standards, and engineers themselves are properly equipped to assess the structure, the climate, and the historic and forecast responses of the infrastructure.

Perhaps the most pressing infrastructure issue facing municipalities, and certainly Toronto, is the erosion of underground infrastructure such as sewer and wastewater treatment systems. OSPE submits that it is imperative to prioritize a focus on building upgrading and maintaining resilient storm and wastewater systems because we are increasingly witnessing the disastrous effects that climate change is having on this front. We encourage the city to take calculated action to not just fix this issue for tomorrow, but to also address it with the future in mind.

The recent trend of extreme weather patterns intensifies the need for smart-planning in this area. In June 2013, Toronto was hit with nearly twice the monthly average of precipitation over a two hour period that resulted in an estimated $940 million worth of insured property damage. And, in the past two weeks, the city has experienced a miniature natural disaster stemming from frozen and burst pipes, which resulted in an excess of 2,000 'no-water' calls to the city from residents whose lives have been negatively impacted – ten times the average number for this time of year.

It is imperative that Toronto prioritizes asset management in a way that reflects the importance of unseen infrastructure. Engineers must be part of the solution! We bring an analytical approach to problem-solving that is based on evidence, quality, and public safety. In the design and development of projects, we conduct cost-benefit analyses in the context of a long-term framework that takes into account sustainability considerations and the complete life-cycle of any given initiative.

OSPE is well-positioned to help the city achieve its carbon emission target for 2050. We are in preliminary discussions to form a consortium with the Ontario Environment Industry Association (ONEIA), the Residential & Civil Construction Alliance of Ontario (RCCAO), the Ontario Sewer and Watermain Construction Association (OSWCA), and the Ontario Road Builders' Association (ORBA). The consortium would explore the possibility of developing a metric-based approach to demonstrate a sustainable asset management framework based on risk-based prioritization that will help municipalities consider the cost/savings of this crucial infrastructure.

OSPE believes that prioritizing robust economic growth and addressing climate change are not mutually exclusive options; while we face unprecedented hazards stemming from climate change, we are also facing unprecedented opportunity. Because engineers possess expert and strategic knowledge across key areas that will drive change, we are well-suited to help capitalize on these opportunities. We hope that the city will allow OSPE to help ensure that Toronto remains a national example on this file and we would be pleased to offer advice to the subcommittee on this imperative issue.

For further discussion, please contact Lee Weissling, Ph.D., Manager, Policy and Government Relations, at leeweissling@ospe.on.ca or 416-223-9961, ext. 230.

Sincerely,

Sandro Perruzza

Sandro Perruzza
CEO

cc: Councillor Sarah Doucette
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