Ontario Association of Architects

November 16, 2018

The Honourable Rod Phillips
Minister of Environment, Conservation and Parks
Ferguson Block
77 Wellesley St. W
Toronto, ON. M7A 2T5

Dear Minister:

As you are likely aware, the Ontario Association of Architects (OAA) is the self-regulating body for the profession of Architecture in Ontario, dedicated to promoting and increasing the knowledge, skills and proficiency of its members. The OAA also governs the practice of architecture and administers the *Architects Act* in Ontario in order that the public interest may be served and protected.

The OAA has long been committed to working with government and other stakeholders to improve conservation efforts across the province and protect the environment for all Ontarians. As such, it was with great interest that the OAA noted the consultation for a made-in-Ontario climate change plan. As part of the OAA's effort to increase conservation efforts and reduce environmental impact, the OAA Sustainable Built Environments Committee (SBEC) was established to serve in an advisory role to the Association on matters of sustainable design and environmental issues. The committee has many recommendations that align with your government's initiatives to address climate change. Please find our key recommendations below:

1. **Deep Energy Retrofits.** Work in tandem with other levels of government, and other provinces, to create an effective Deep Energy Retrofit (DER) program to significantly reduce the energy use of existing buildings. DERs take a whole-building approach to energy use and achieve a much more economical and energy efficient building. A DER program will help to significantly reduce greenhouse gas (GHG) emissions, offer technology-based solutions and create resiliency for Ontario's infrastructure. The OAA is currently undertaking a DER to our headquarters and we expect significant energy and long-term monetary savings by achieving a net-zero energy and zero carbon design solution.
2. **Changes to the Building Code.** Performance based energy efficiency requirements in the building code can be improved by adopting absolute energy use metrics and moving away from comparisons to a hypothetical 'reference' building. Absolute energy use should be measured in terms of energy use intensity (EUI) – a measure of total energy use of the building divided by its total floor area. Putting requirements in terms of absolute EUI will ensure that we can accurately regulate the amount of energy new buildings can consume, and will create easily understood parameters for building designers, allowing them to devise innovative solutions within those parameters. Changes to the building code will help to significantly reduce GHG emissions across the province and create resiliency in Ontario's infrastructure.
3. **Embodied Energy and Waste.** Most energy consumed in the lifecycle of a building is in its operation, but there are significant emissions related to the construction of buildings. Many building materials require very high energy inputs, or use foaming agents that

release potent GHGs. Furthermore, the building industry has experienced a lengthening of supply chains, which significantly contributes to transportation-related GHG emissions. Policies that support the use of more locally sourced or manufactured materials as well as materials with inherently lower embodied energy will help to reduce the environment footprint of new buildings. As well, a policy that requires adaptive re-use of provincial facilities no longer suited to their original purposes to conserve existing building materials will set an example for reducing GHG emissions. Initiatives like this will help to reduce construction and demolition waste, which is thought to be around 25% of non-organic landfill waste. These initiatives will work well to conserve resources and reduce GHG emissions across the province.

4. **Building Energy Disclosure and Data.** Enact mandatory building energy disclosure regulations for all buildings, regardless of size. Building EUI, determined from utility bills, should be disclosed for all buildings at the point of sale in industry standard units. Energy disclosure laws are in place in many states and cities in the United States, and in Germany. Requiring energy disclosure will increase the profile and appeal of energy efficient buildings. Possession of energy use information will allow buyers to be selective and therefore market forces will support a reduction in building energy use. Good information is needed to help buyers and owners respond to climate change. This initiative will help to reduce GHG emissions and lead to more resilient infrastructure across the Province.
5. **Mass Timber.** Ontario has the potential to become a global leader in the use of sustainably-harvested wood for building construction. Not only do trees capture carbon during their growth, but that carbon is also sequestered in the buildings and not emitted into the atmosphere. Where trees are cut down, new forests can be planted in their replacement to begin the process anew. However, it is critical to recognize the importance of the entire forest ecosystem and the role it plays not only for environmental health, but also in the life and economies of Indigenous communities within whose traditional territories the resource exists. The use of wood in building construction, other than as currently used in low-rise residential construction, can significantly reduce the amount of GHG emissions across the province.

It is clear that climate change is an issue of utmost urgency and importance. The OAA believes these are initiatives that can be quickly implemented to provide a balanced solution for all Ontarians that is affordable, goes a long way toward fighting climate change, will help grow the economy, add jobs, and is a sound investment for owners. We welcome any future opportunity to explore this proposal with you and your Ministry and to continue our productive working relationship for the benefit of all Ontarians.

Sincerely,

John K. Stephenson, Architect
OAA, MRAIC
President