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MASONRY AND LOW-CARBON BUILDINGS

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in this issue

Exploring the intricacies of
Masonry and low-carbon
buildings in today's world.

Exploring The Intricacies of Masonry & Low-Carbon Buildings in Canada & Around The World

It is an undeniable fact that every year in Canada and around the world the impacts of climate change is becoming more and more prevalent with the passage of time. Even for climate change deniers there is no escaping the fact that insurance claims have risen around the world due to an increase in extreme climate events^{1,2} which has led to a substantial rise in uninsurable assets both in the private and public sector². This shift has begun to greatly encourage business leaders and public officials to closely examine adaptation and mitigation policies as it relates to climate change and as such, government of all levels are looking at implementing built form principles which are able to withstand the stresses of more frequent extreme climatic events while ensuring that the environmental impacts of these built forms are minimal. As a result, the focus on low-carbon buildings now stands to significantly impact how buildings are constructed and utilized throughout their life-cycle.

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Globally, buildings account for 40% of energy resources, 25% of water resources and 40% of other resources which is substantial. In an attempt to address related issues, Governments across North America are implementing codes and standards which aim to ultimately reduce the impact buildings have on the environment. In Spring of this year, New York's City Mayor Bill de Blasio made headlines when he announced that the City would be banning full glass sky scrapers in an attempt to reduce the carbon footprint of buildings in the city. Closer to home, there are also changes aimed at reducing the impact of buildings on the climate underway. The Ontario Government has a long-term plan which will require all buildings constructed after 2030 to be net-zero. This means that codes will become more strict as we move toward 2030. The Ontario Building Code for 2020 will require more thermal considerations aimed at reducing the overall impact of the building on the environment surrounding it. By 2020 the code will require that all houses have continuous insulation through the foundation, triple-pane windows and sliding doors, air leakage testing and more restrictive limitation as they relate to trade-offs. By 2022, the Ontario Government has proposed that the overall energy consumed by houses must be decreased by 20% and building envelope trade-offs are to be eliminated all together. There is also an effort to address this issue at the municipal level of government. The City of Toronto has taken the lead in ensuring that the future built form of the city is constructed in a way which is mindful of the environmental impacts buildings can have. The Toronto Green Standard (TGS) aims to aggressively target the efficiency and subsequent carbon footprint of buildings. There are a number of areas upon which Toronto has focused and much of the TGS follows the National Energy Code for Buildings 2017 policies. A main area of focus for the City of Toronto is how enclosures impact the ultimate carbon footprint a building produces. Much like New York City, Toronto will be taking steps to limit the amount of glass which can be used on a building's exterior. In fact, by 2022 a glazing ratio of no more than 40% will be allowed on newly constructed buildings in the City of Toronto. This means that 60% of the exterior of buildings in Toronto will have to be clad in a material other than glass and which provides superior thermal properties.

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The masonry industry is provided with an opportunity in this context. It is well known that masonry materials provide superior life-cycle properties due to the inherent resilience and durability of the product. As government officials work to tackle the challenges society faces as we experience climate change, the masonry industry stands ready to provide a proven solution which addresses these issues.



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¹ Ontario Centre for Climate Impacts and Adaptation Resources, 2015.

² Intact Centre on Climate Adaptation.

MASONRYWORX

ANNUAL

GENERAL

MEETING

TUESDAY

NOVEMBER 12, 2019

**SAVE
THE
DATE!**