



April 2018

Issue  
41

# BUILDING TOMORROW'S INFRASTRUCTURE TODAY

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## Building Tomorrow's Infrastructure Today

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and why do we have one

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Assessments

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# Building Tomorrow's Infrastructure Today

The arrival of Spring means that busier days are just around the corner for our industry. As construction season inches closer, there will also be a Spring provincial election on June 7th. As such, the political parties in the province are ramping up their campaigns and the promises and commitments are now being issued. A key component of the election campaigns will be in relation to infrastructure.

**“The fact is that Ontario’s infrastructure is aging, and as that happens a gap referred to as infrastructure deficit continues to expand.”**

The fact is that Ontario’s infrastructure is aging, and as that happens a gap referred to as infrastructure deficit continues to expand. This gap becomes more noticeable as the province grows and the demands on our infrastructure assets continue to increase. Our schools, hospitals and community centres are increasingly in need of renewal and a move by the government to be more aware of infrastructure asset management has increased awareness around the infrastructure deficit. Regardless of which party is successful on June 7th, there are key considerations and opportunities the masonry industry should consider in regards to infrastructure.











# What is an Infrastructure Deficit and why do we have one?

An infrastructure deficit refers to the gap between the financial resources needed to maintain or renew infrastructure assets versus the actual dollars spent on maintenance or renewal. The Federation of Canadian Municipalities (FCM) has estimated the national infrastructure deficit to be in excess of \$123-billion. The city of Mississauga provided an outlook of infrastructure deficit of \$1.1 billion over the next twenty years. Although we consistently hear about allocation of infrastructure dollars, closing this gap will require effort from all three levels of government.

There are a number of reasons why this gap exists, many of them relate to political priority or process. In the post World War II boom years, government spent substantial amounts of money on infrastructure, building the roads, hospitals, schools and other services we use today. However, as political philosophies on government spending change so does the amount of money spent on infrastructure. Both the FCM and Canadian Centre for Policy Alternatives report a steady decrease in infrastructure spending since the 1980's. This has led to an acceleration of depreciation for infrastructure assets.

For Ontario, an accurate assessment of the infrastructure deficit was only completed in late 2017. *Building Better Lives: Ontario's Long-Term Infrastructure Plan 2017* not only outlines spending guidelines and requirements for public projects but also offers an asset inventory overview of current infrastructure assets in the Province of Ontario. When considering the inventory of building infrastructure assets (hospitals, schools, colleges and universities etc.) the infrastructure deficit is very apparent;

	Sector	Total Asset Value in \$ Billions	Number of Building Assets	Average Age	% needing replacement in next 3 yrs.
	Health	23.9	871	47	42%
	Elementary & Secondary Education	53.6	4500	41	26%
	Post secondary Education	24.3	1116	45	N/A
	Government Administration & Justice	7.5	987	Office: 50 Justice: 47 Other: 50	Office: 24% Justice: 6% Other: 6%
	Natural Resources and Forestry	1.7	7185	26	41%
	Tourism and Culture	1.6	794	55	75%
	<b>Total:</b>	\$12.6 bn	15453	45/avg	N/A

The average age of building infrastructure assets in the province is 45 years. This means as these assets age the maintenance and renewal needs continue to increase.



# Masonry and Life Cycle Assessments

Now that tangible figures have been applied to the provincial infrastructure inventory the argument for the usage of masonry materials becomes even more important. Political cycles are just that; cycles which means that infrastructure asset management and up-keep may not always be a priority for the government of the day. Therefore, the need to build properly at the onset of an infrastructure asset makes sense for a number of reasons. Should the current model of governance continue allowing the deterioration of infrastructure assets at a rate which out paces their maintenance needs, decision makers should opt to build with materials which are low maintenance and offer durability. Furthermore, with increased scrutiny on government spending it is important that infrastructure assets are built in a manner which protects the investment of the taxpayer.

“Both structural and veneer masonry wall systems boast superior qualities which factor into a LCA. When compared with other materials masonry can be effective in excess of 75-years before needing any type of maintenance”

Considering the performance of a building over the term of its life is referred to as a Life Cycle Assessment (LCA). LCAs consider metric such as building value and maintenance cost over time, total building systems performance, environmental impact and end of life decommissioning. Both structural and veneer masonry wall systems boast superior qualities which factor into a LCA. When compared with other materials masonry can be effective in excess of 75-years before needing any type of maintenance. This stability is important because although government policies around infrastructure spending and maintenance is subject to four year cycles, masonry will perform consistently over time.

## INTEGRATING MASONRY WITH SIX-STOREY WOOD-FRAME STRUCTURES

**Presented By:**

**Dr. Mark Hagel** (Alberta Masonry Council)

**When:** Weds. June 13th & Thurs. June 14th  
9AM - 11AM | 1PM - 3PM (each day)

**Where: MasonryWorx**  
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