APPENDIX B

# FOR EXECUTIVE COMMITTEE June 9, 2021 ITEM: 4.2.b

**LardenCODE Consulting Architect** 

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Tel.: 416-433-7009

By Email to: KristiD@oaa.on.ca

26 April 2021

Kristi Doyle, Executive Director Ontario Association of Architects 111 Moatfield Drive Toronto, ON M3B 3L6

Re: General Review Requirements in the Architects Act and the Building Code

Dear Ms. Doyle,

This letter responds to your request for provision of opinion contained in your email of 01 February 2021 as to whether or not the "permitted use of firewalls for determining building size in the Ontario Building Code (OBC) contravenes or circumvents the intent or the letter of the Architects Act in establishing the protected scope of work or requirement for design by architects". It is understood that your primary concern relates to residential buildings not exceeding 3 storeys in height.

In response to your request, I have reviewed the content of the Architects Act and the Building Code that is relevant to size and occupancy classification of buildings, the construction of which must be either designed or reviewed by an architect.



It is my conclusion is that there is effectively no difference between the requirements of the Architects Act and the OBC with respect to the mandating of general review by an architect for various occupancies classifications and sizes of buildings, particularly buildings devoted to residential use.



My review and rationale are elaborated upon as follows:

#### 1. Defined Terms:

The defined terms 'building area', 'gross area' and 'grade' are used in the Architects Act and in the OBC and are to be considered when one compares requirements for general review of construction in those documents. *Building area* and *grade* have been defined terms in the OBC from the inception of the Code in 1976; *gross area* was added as a defined term in 1986 as an aspect of co-ordination of the OBC with revisions to the Architects Act and the Professional Engineers Act relative to the relationship between architects and professional engineers with respect to building design and construction. It is my understanding that, prior to those

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revisions, descriptions of what constituted the practice of architecture relative to building descriptions and enforcement of the Act were deemed inadequate, and it was decided that revising the Act using terms defined in the OBC would be appropriate; however, wording of some of the definitions was modified in the Architects Act, compared to the OBC definitions. The definitions of building area, gross area and grade as they appear in the OBC and Section (11) of the Architects Act are as follows.

# **Building Area**

#### OBC:

Building area means the greatest horizontal area of a building above grade,

- (a) within the outside surface of exterior walls, or
- (b) within the outside surface of exterior walls and the centre line of *firewalls*.

#### **Architects Act:**

"Building area" means the greatest horizontal area of a building within the outside surface of exterior walls or, where a firewall is to be constructed, within the outside surface of exterior walls and the centre line of firewalls.

The definition of building area in the Architects Act does not include the term 'grade'. Consequently, it could be held that 'building area' could be determined by the area in plan of fully below-ground basement under the Architects Act, which would differ from the OBC under which building area is based to the area of a building above grade. However, in my experience, this difference has not been consequential relative to the enforcement of requirements for involvement of architects in the design of buildings and general review of construction.

## Gross Area

# OBC:

Gross area means the total area of all floors above grade measured between the outside surfaces of exterior walls or between the outside surfaces of exterior walls and the centre line of *firewalls*, except that, in any *occupancy* other than a *residential occupancy*, where an access or a *building* service penetrates a *firewall*, measurements shall not be taken to the centre line of such firewall.

## Architects Act:

"Gross area" means the total area of all floors above grade measured between the outside surfaces of exterior walls or, where no access or building service penetrates a firewall, between the outside surfaces of exterior walls and the centre line of firewalls but in a residential occupancy where access or a building service penetrates a firewall, the measurement may be taken to the centre line of the firewall

With respect to taking the measurement of a floor to the centre line of a firewall, the use of the 'shall not be taken' terminology in the OBC definition compared to the 'may be taken' terminology in the Architects Act could engender debate. For a residential building bounded by a firewall, the OBC definition has the grammatically clear effect of limiting measurement of floors to the centre line of a firewall whether or not the firewall is penetrated by an 'access or a

building service' while the Architects Act definition can be read as indicating that measuring floor areas to the centre line of a firewall is optional. However, it would be unreasonable to expect that the legal drafter's intent was to provide a choice as to whether or not floor areas are measured to the centre line of a firewall that is penetrated by an opening or a building service; consequently it is my opinion that the definition of 'gross area' in the Architects Act is intended to have the same meaning as the definition of gross area in the OBC.

### Grade

#### OBC:

*Grade* means the average level of proposed or finished ground adjoining a *building* at all exterior walls.

#### Architects Act:

"Grade" means the lowest of the average levels of finished ground adjoining each exterior wall of a building, but does not include localized depressions such as for vehicle or pedestrian entrances.

The definition of 'grade' in the Architects Act has a literally different meaning than does the definition of *grade* in the OBC. *Grade* in the OBC is understood as meaning the average level of finished ground around the entire perimeter of a building, whereas as 'grade' as described in Section (11)(6) of the Architects Act appears to refer to lowest of the average levels of finished ground adjoining the several sides of a building. For a building located on a sloping site and acknowledged as having multiple sides, the Architects Act definition can be read as meaning that each of those sides would have its own 'average level of finished ground' and 'grade' would be the lowest or farthest "downhill" of those several levels. Consequently, for a building on a sloping site, 'grade' under the Architects Act would be at a lower datum that would *grade* under the OBC.

Understood this way, application of the definition of 'grade' in the Architects Act could result in the floor area of a below-*grade* basement contributing to the calculation of 'gross area' for a building on sloping site that would not be considered under a calculation of *gross area* under the OBC.

However, despite the apparent failure in the drafting of the definition of grade in the Architects Act to accurately reflect the meaning of *grade* in the OBC, I have never experienced the calculation of gross area being contended based on the differences between the definitions of grade in the Architects Act and OBC, and do not expect it was intended that there be a difference in meaning in the drafting of the Architects Act.

2. Subsections (1) and (2) of Section 11 of the **Architects Act** set out a general restriction to the effect than "no person shall engage in the practice of architecture" without being licensed under the Act or holding a certificate of practice. Subsection (3) contains

<sup>&</sup>lt;sup>1</sup> Research concerning grammatical usage of 'shall' and 'may' includes an indication that 'shall', when used in the third person, signifies a command or something required to be done, while 'may' is used to suggest a possibility, the ability to do something or an obligation to do something; the last circumstance (obligation) is said to usually operate as 'shall' and 'must' in legal documents.

- exceptions to that general restriction, based on descriptions of building use and size defined terms derived from the OBC.
- 3. Subsection (4) of Section 11 of the **Architects Act** sets out rules "governing the relationship between architects and engineers [for] providing a design for and carrying out the general review of the construction ... of a building", and also uses the terms describing building use and size derived from the OBC. However, as Subsection (4) is specifically described as containing rules "governing the relationship between architects and engineers "and is not described as serving any other purpose, it is expected that persons reading that Subsection would not consider it to be modifying the restrictions on who may practice architecture in Subsections (1) and (2) and the exceptions thereto contained in Subsection (3). Consequently, I have not considered Subsection (11)(4) as demonstrating intent to address who may conduct general review of construction apart from architects and professional engineers.
- 4. Table 1.2.2.1. in Subsection 1.2.2. General Review in Division C of the **OBC** sets out requirements for general review of construction by an architect, based on building classification by major occupancy and building description.

## Table 1.2.2.1.<sup>(4),</sup> General Review

Forming Part of Sentence 1.2.2.1.(1)

	Forming Part of Se		
Item	Column 1	Column 2	Column 3
	Building Classification by Major Occupancy <sup>(5)</sup>	Building Description	General Review by:
1.	Assembly occupancy only	Every building	Architect and professional engineer <sup>(1)</sup>
2.	Assembly occupancy and any other major occupancy except industrial	Every building	Architect and professional engineer <sup>(1)</sup>
3.	Care, care and treatment or detention occupancy only	Every building	Architect and professional engineer <sup>(1)</sup>
4.	Care, care and treatment or detention occupancy and any other major occupancy except industrial	Every building	Architect and professional engineer <sup>(1)</sup>
5.	Residential occupancy only, other than retirement homes	Every building that exceeds 3 storeys in building height	Architect and professional engineer <sup>(1)</sup>
		Every building that exceeds 600 m <sup>2</sup> in gross area and that contains a residential occupancy other than a dwelling unit or dwelling units	Architect <sup>(2)</sup>
6.	Residential occupancy only, other than retirement homes	Every building that exceeds 600 m <sup>2</sup> in gross area and contains a dwelling unit above another dwelling unit	Architect <sup>(2)</sup>
		Every building that exceeds 600 m <sup>2</sup> in building area, contains 3 or more dwelling units and has no dwelling unit above another dwelling unit	Architect <sup>(2)</sup>
7.	Residential occupancy, other than retirement homes, and any other major occupancy except assembly, care, care and treatment, detention or industrial occupancy	Every building that exceeds 600 m <sup>2</sup> in gross area or 3 storeys in building height	Architect and professional engineer(1)
7.1	Retirement home only	Every building	Architect and professional engineer <sup>(1)</sup>
7.2	Retirement home and any major occupancy except industrial	Every building	Architect and professional engineer <sup>(1)</sup>
8.	Business and personal services occupancy only	Every building that exceeds 600 m <sup>2</sup> in gross area or 3 storeys in building height	Architect and professional engineer <sup>(1)</sup>

9.	Business and personal services occupancy and any other major occupancy except assembly, care, care and treatment, detention or industrial occupancy	Every building that exceeds 600 m <sup>2</sup> in gross area or 3 storeys in building height	Architect and professional engineer <sup>(1)</sup>
10.	Mercantile occupancy only	Every building that exceeds 600 m <sup>2</sup> in gross area or 3 storeys in building height	Architect and professional engineer <sup>(1)</sup>
11.	Mercantile occupancy and any other major occupancy except assembly, care, care and treatment, detention or industrial occupancy	Every building that exceeds 600 m <sup>2</sup> in gross area or 3 storeys in building height	Architect and professional engineer <sup>(1)</sup>
12.	Industrial occupancy only and where there are no subsidiary occupancies	Every building that exceeds 600 m <sup>2</sup> in gross area or 3 storeys in building height	Architect or professional engineer <sup>(3)</sup>
13.	Industrial occupancy and one or more other major occupancies where the portion of the area occupied by one	The non-industrial portion of every <i>building</i>	Architect and professional engineer <sup>(1)</sup>
	of the other <i>major</i> or subsidiary <i>occupancies</i> exceeds 600 m <sup>2</sup>	The industrial portion of every building	Architect or professional engineer <sup>(3)</sup>
14.	Industrial occupancy and one or more other major occupancies where no portion of the area occupied by one of the other major or subsidiary occupancies exceeds 600 m <sup>2</sup>	Every building that exceeds 600 m <sup>2</sup> in gross area or 3 storeys in building height	Architect or professional engineer(3)

- 5. Requirements for buildings that contain or might contain a residential occupancy (other than a retirement home, which always requires general review by an architect) and that do not exceed 3 storeys in building height are contained in Items 5, 6, 7, 9, 11 and 13 of Table 1.2.2.1., although based on background information provided, it is understood that your primary interest would relate to Items 5, 6 and 7. There are actually five different descriptions of buildings requiring general review by an architect in Items 5, 6 and 7 of OBC C Table 1.2.2.1.:
  - (i) residential occupancy only every building that exceeds 3 storeys in building height;
  - (ii) residential occupancy only every building that exceeds 600 m<sup>2</sup> in gross area and that contains a residential occupancy other than a dwelling unit or dwelling units;
  - (iii) residential occupancy only every building that exceeds  $600 \text{ m}^2$  in gross area and contains a dwelling unit above another dwelling unit;
  - (iv) residential occupancy only every building that exceeds 600 m<sup>2</sup> in building area, contains 3 or more dwelling units and has no dwelling unit above another dwelling unit;
  - (v) residential occupancy and any other major occupancy except assembly, care, care and treatment, detention or industrial occupancy every building that exceeds 600 m<sup>2</sup> in gross area or 3 storeys in building height.

Relative to a building containing a residential occupancy, it appears that descriptions (i), (ii), (iii) and (v) are intended to have the same effect as restrictions contained in Subsection (3)(a) of Section 11 of the Architects Act and description (iv) is intended to have the same effect as the restriction in Subsection (3)(b) of Section 11 of the Architects Act.

6. Requirements pertaining to *retirement homes* – which is a particular type of residential occupancy – were added to OBC C Table 1.2.2.1. without corresponding mention being made in an updated Architects Act. However, the OBC stipulates that a retirement home requires general review of construction by an architect, and therefore no comparison of requirements for retirement homes in the Architects Act and OBC has been performed.

7. No conflict is perceived between the content of Items 7.1 to 14 of OBC C Table 1.2.2.1.

The attachment to this letter provides a comparison of Architects Act Section 11 requirements with corresponding content of OBC C Table 1.2.2.1.

Please contact me if you have questions regarding this report or its attachment.

Sincerely,

Larden CODE Consulting Architect

Allan E. Larden, OAA, FRAIC

Attachment to 26 April 2021 Letter to K. Doyle re General Review Requirements in the Architects Act and the Building Code

Subject	Comparable Restrictions in Architects Act and Ontario Building Code	s Act and Ontario Building Code	Comment
•	Architects Act	Ontario Building Code, Division C Table 1.2.2.1. General Review	
Definition: <b>building area</b>	"building area" means the greatest horizontal area of a building within the outside surface of exterior walls or, where a firewall is to be constructed, within the outside surface of exterior walls and the centre line of firewalls;	Building area means the greatest horizontal area of a building above grade,  (a) within the outside surface of exterior walls, or  (b) within the outside surface of exterior walls and the centre line of firewalls.	In my opinion, there is effectively no difference in meaning.
Definition: gross area	"gross area" means the total area of all floors above grade measured between the outside surfaces of exterior walls or, where no access or building service penetrates a firewall, between the outside surfaces of exterior walls and the centre line of firewalls but in a residential occupancy where access or a building service penetrates a firewall, the measurement may be taken to the centre line of the firewall	Gross area means the total area of all floors above grade measured between the outside surfaces of exterior walls or between the outside surfaces of exterior walls and the centre line of firewalls, except that, in any occupancy other than a residential occupancy, where an access or a building service penetrates a firewall, measurements shall not be taken to the centre line of such firewall.	In my estimation, no difference in meaning was intended. However, the use of 'may' in the Architects Act could infer that it is permitted, but not necessary, to measure gross area to centre line of a firewall. By contrast, the use of 'shall' in the OBC is definitive. It is expected that there was not intent to have the meaning of gross area different under the Architects Act than in the OBC.
Definition: <b>grade</b>	"grade" means the lowest of the average levels of finished ground adjoining each exterior wall of a building, but does not include localized depressions such as for vehicle or pedestrian entrances	Grade means the average level of proposed or finished ground adjoining a building at all exterior walls.	On a sloping site, the difference in wording could result in a different calculation of gross area, although in practice it is expected that reference would normally be made only to the OBC definition.
General Review by Architect	<ul> <li>(3) Subsections (1) and (2) do not apply to,</li> <li>(a) the preparation or provision of a design for the construction, enlargement or alteration of a building,</li> <li>(i) that is not more than three storeys and not more than 600 square metres in gross area as constructed, enlarged or altered, and</li> <li>(ii) that is used or intended for one or more of residential occupancy, business occupancy, personal services occupancy, mercantile occupancy or industrial occupancy</li> </ul>	Residential occupancy only, other than retirement homes:  Every building that exceeds 3 storeys in building height (also requires general review by a professional engineer)	There is no conflict between the Architects Act and the OBC in respect of a building exceeding 3 storeys in height requiring general review by an architect.

-	Comparable Restrictions in Architects Act and Ontario Building Code	s Act and Ontario Building Code	
Subject	Architects Act	Ontario Building Code, Division C Table 1.2.2.1. General Review	Comment
General Review by Architect	<ul> <li>(3) Subsections (1) and (2) do not apply to,</li> <li>(a) the preparation or provision of a design for the construction, enlargement or alteration of a building,</li> <li>(i) that is not more than three storeys and not more than 600 square metres in gross area as constructed, enlarged or altered, and</li> <li>(ii) that is used or intended for one or more of residential occupancy, business occupancy, personal services occupancy, mercantile occupancy or industrial occupancy</li> </ul>	Residential occupancy only, other than retirement homes:  Every building that exceeds 600 m² in gross area and that contains a residential occupancy other than a dwelling unit or dwelling units	There is no conflict between the Architects Act and the OBC in respect of a residential building having a gross area exceeding $600 \text{ m}^2$ requiring general review by an architect.
General Review by Architect	<ul> <li>(3) Subsections (1) and (2) do not apply to,</li> <li>(a) the preparation or provision of a design for the construction, enlargement or alteration of a building,</li> <li>(i) that is not more than three storeys and not more than 600 square metres in gross area as constructed, enlarged or altered, and</li> <li>(ii) that is used or intended for one or more of residential occupancy, business occupancy, personal services occupancy, mercantile occupancy or industrial occupancy</li> </ul>	Residential occupancy only, other than retirement homes:  Every building that exceeds 600 m² in gross area and contains a dwelling unit above another dwelling unit	There is no conflict between the Architects Act and the OBC in respect of a building having a gross area exceeding 600 m² and containing a dwelling unit above another dwelling unit.
General Review by Architect	Exception  (3) Subsections (1) and (2) do not apply to,  (b) the preparation or provision of a design for the construction, enlargement or alteration of a building that is not more than three storeys and that is used or intended for residential occupancy and,  (ii) that is not more than 600 square metres in building area as constructed, enlarged or altered and contains three or more attached dwelling units, each of which is constructed directly on grade, with no dwelling unit;	Residential occupancy only, other than retirement homes:  Every building that exceeds 600 m² in building area, contains 3 or more dwelling units and has no dwelling unit above another dwelling unit	There is no conflict between the Architects Act and the OBC in respect of a building that exceeds 600 m² in building area, contains 3 or more dwelling units and has no dwelling unit above another dwelling unit.

Comment		There is no conflict between the Architects Act and the OBC in respect of a building that exceeds 600 m² in gross area or 3 storeys in building height where that building contains a residential occupancy and any other major occupancy except assembly, care, care and treatment, detention or industrial occupancy.
Act and Ontario Building Code	Ontario Building Code, Division C Table 1.2.2.1. General Review	Residential occupancy, other than retirement homes, and any other major occupancy except assembly, care, care and treatment, detention or industrial occupancy:  Every building that exceeds 600 m² in gross area or 3 storeys in building height
Comparable Restrictions in Architects Act and Ontario Building Code	Architects Act	Exception  (3) Subsections (1) and (2) do not apply to,  (a) the preparation or provision of a design for the construction, enlargement or alteration of a building,  (i) that is not more than three storeys and not more than 600 square metres in gross area as constructed, enlarged or altered, and  (ii) that is used or intended for one or more of residential occupancy, business occupancy, personal services occupancy, mercantile occupancy or industrial occupancy;
	Subject	General Review by Architect