



Guide to the Completion of the City of Kitchener Ontario Building Code Data Matrix for New Buildings

A building code data matrix provides an overview of important code requirements applicable to the design of a new building. Proper evaluation and completion of this matrix is critical to identify the requirements that need to be considered and assists the Design Professional and Building Official to understand the proposed design approach for the building.

The following information has been provided to assist with the proper completion of the matrix.

Note that all Ontario Building Code (OBC) references cited are located in Division B, unless indicated otherwise.

Project Information:

Indicate if the subject building falls under the scope of Part 3 or Part 9 by checking the applicable box. To determine if the building is Part 3 or Part 9 refer to OBC articles 1.1.2.2. and 1.1.2.4. of Division A.

Provide a brief description of the project (ex. New Industrial Warehouse Building).

Major Occupancy Classification

Identify each of the major occupancy groups in the building and describe their use. (e.g. Group D - Business and Personal Services / Medical Clinic). Refer to OBC 3.1.2. and to Appendix A to the building code for multiple major occupancies. Although Part 11 is not applicable to new buildings, you may also refer to the Hazard Index Tables 11.2.1.1.B – 11.2.1.1.N in Part 11 and A-3.1.2.1 (1) of Appendix A to the building code for assistance in determining or classifying major occupancies.

Superimposed Major Occupancies

Indicate if the building is designed with superimposed major occupancies. If Yes, provide a brief description. (e.g. Three stories of Group C – Residential, superimposed over one storey of Group E - Retail). Refer to 3.2.2.7. / 9.10.2.3. for further clarity.

Building Area

Indicate the proposed building area for the building. Refer to the OBC definition of building area under Division A, 1.4.1.2. For multi suite buildings, do not use this field for the suite area.

Gross Floor Area

Indicate the floor area of each storey and provide the total gross floor area for the proposed building. Refer to the OBC definition of gross floor area under Division A, 1.4.1.2. Note that as per the OBC definition this figure does not include floor area below grade (i.e. does not include the basement), refer to the OBC definitions of basement, and first storey to assist in determining. For buildings higher than 3 storeys, supplemental information for each storey may need to be submitted.

Basement Area

Indicate the basement area for the proposed building. Refer to the OBC definition of basement under Division A, 1.4.1.2.

Mezzanine(s) Area

Indicate if there are any mezzanines proposed for the subject building. If there are mezzanines proposed check the “Yes” box. If a mezzanine is considered a storey for the purposes of building height as per OBC 3.2.1.1., then please check the “No” box, and ensure to count it under the following section “Number of Storeys”.

There are two types of mezzanines, ‘open’ mezzanines which conform with 3.2.1.1.(3)&(8) / 9.10.4.1.(2), and ‘enclosed’ mezzanines which conform with 3.2.1.1.(4) / 9.10.4.1.(2). Complete the requested information for each type of mezzanine(s) within the building or suite as applicable.

This section of the matrix is intended for simplified mezzanine configurations, for complex configurations, or where multiple mezzanines are located within the same room or suite, more detailed information regarding the specifics of each mezzanine may need to be included with the permit submission to properly evaluate.

Number of Storeys

Enter the number of storeys proposed above grade and below grade. Refer to OBC definitions of storey, grade, first storey, basement, and mezzanine under Division A, 1.4.1.2. Also review the provisions of Division B, 3.2.1.1. Where a mezzanine is considered a storey for the purposes of determining building height ensure to count as a storey in this portion of the matrix.

Height of Building

Enter the height of the building from finished grade to the floor level of the top storey

Number of Streets / Access Routes

Check the appropriate box for the number of streets / access routes that the building is proposed to face. If selecting more than one street, review article 3.2.2.10. and ensure the design meets the criteria for facing 2 or 3 streets. (i.e. Where a building site / property abuts two municipal streets – corner lot, that does not necessarily mean the building faces 2 streets as described by the OBC).

Importance Category

Check the appropriate box for Importance Category that the proposed building falls under. Refer to OBC 4.1.2.1. for further details. Obtain information as required from a structural and geotechnical engineer.

Building Classification

Complete the fields to specify the major occupancy and applicable article (3.2.2.20 to 3.2.2.83.) that the building falls under. For Part 9 buildings, leave the 3.2.2.____ field blank.

A building may have different major occupancies, but it is generally given one classification with the most restrictive occupancy governing. However, superimposed occupancies may be separately classified as described under 3.2.2.7. / 9.10.2.3.

Construction Types

Specify the building construction restrictions (i.e. is combustible construction permitted, etc.).

The 'OBC Requirement' section shall be based on the construction type dictated by the applicable 3.2.2. article for the building. In the case of a Part 9 building, combustible construction is permitted.

The 'Actual' construction section shall be based on the actual construction proposed for the building. Note that non-combustible shall only be selected where all construction elements are proposed to be non-combustible or comply with 3.1.5., if some or all do not, the 'combination combustible and non-combustible' box should be checked.

Sprinkler System

Check the box indicating whether a sprinkler system is 'required' or 'not required' by the OBC to be installed in all or part of the building. If required in part of the building only check the 'required' box, as this will be further clarified in the next section. If not required by the OBC to be installed, but is or was elected to be installed, please check the 'not required' box.

Under the 'proposed' section, specify if a sprinkler system is proposed in the entire building, part of the building (various options listed), or if not required and not proposed to be installed, check the 'none' box.

Select from the drop down if NFPA 13, 13D or 13R is applicable to the building, and specify which edition of the applicable standard the system will be designed and installed to. Where a sprinkler system is not required or installed, this portion may be left blank. Where a sprinkler system is not required by OBC and is elected to be installed for other purposes and the system is not proposed to conform to the applicable NFPA standard (13, 13D or 13R) the section may be left blank and provide explanation in the notes field.

Standpipe

Check the box indicating whether a standpipe and hose system is 'required' or 'not required' by the OBC to be installed in all or part of the building. If required in part of the building only check the 'required' box, as this will be further clarified in the next section.

Under the 'proposed' section, specify if a standpipe system is proposed in the entire building, part of the building (various options listed), or if not required and not proposed to be installed, check the 'none' box.

Select from the drop down if NFPA 14 is applicable to the building and specify which edition of the applicable standard the system will be designed and installed to. Where a standpipe system is not required or installed, this portion can be left blank. Where a standpipe system is not required by OBC and is elected to be installed for other reasons and the system is not proposed to conform to the NFPA 14 standard the section may be left blank and provide explanation in the notes field.

Fire Alarm

Check the box indicating whether a fire alarm system is 'required' or 'not required' by the OBC to be installed in all or part of the building. Indicate whether the fire alarm is a single stage or two-stage fire alarm. If a fire alarm is not required and not installed, check the "none" box. For unique installations (i.e. alternative solutions) where the check box options may not fully describe the system, check the 'other' box and add complete the notes section. Unlike sprinkler and standpipe systems, where a fire alarm is not required by OBC but is voluntarily installed, it must fully conform to the requirements of the OBC and referenced fire alarm performance standards.

Required Fire Resistance Ratings

Specify the fire resistance rating (FRR) required for floors, roofs and mezzanines within the building as prescribed by the applicable 3.2.2. article for the building, or 3.2.1.4. for floors over basements. For Part 9 buildings as prescribed by 9.10.8.1.

In addition, where non-combustible construction is used in lieu of ratings (where permitted) specify using the drop down.

Water Service / Supply is Adequate

Identify if there is adequate water supply for firefighting provided for the building. For Part 9 buildings this section may be left blank.

High Building (3.2.6.)

Identify if the building is a high building as specified by article 3.2.6.1. For Part 9 buildings the 'No' box may be checked, or the field left blank.

Occupant Load

Provide design information relating to the occupant load of the building or suite, as applicable, by completing the various fields;

Proposed Total: Specify the new total occupant load

Check the applicable box to identify what the occupant load criteria used was based on.

For complex buildings or buildings with multiple suites, additional information and/or an occupant load breakdown should be provided.

Washrooms

Provide information as to the number of male, female, staff and universal washrooms required by the OBC as well as the number of fixtures provided for each in the applicable spaces provided. Staff washrooms are only applicable to restaurants. If not a restaurant, leave that field blank.

Barrier-Free Design

Check the appropriate box for barrier-free design, and if “No”, provide an explanation of why not. If indicating that all, or portions of the building do not require a barrier-free path of travel, ensure you meet an exemption specifically listed in Section 3.8. and ensure to provide the reference.

Concealed space (floor or ceiling) used as a plenum

Check the appropriate box if a concealed floor or ceiling space will be used as a plenum. Refer to definition of plenum in OBC Division B, 1.4.1.2. and additional information under article 3.6.4.3.

Hazardous Substances

Check the appropriate box regarding hazardous substances to be used or stored in connection with any of the occupancies in the project. If ‘Yes’ is checked, provide further details. In addition, the City of Kitchener [Building and Fire Code Design form](#) will be required to be completed and submitted with the permit application. Refer to OBC Division B, 3.3.1.2., 3.3.1.19. and the Ontario Fire Code for further information.

Spatial Separations

Provide spatial separation information in the appropriate fields for each building face as applicable.

This section of the matrix is intended for simplified spatial separation calculations. For complex building faces or buildings that will be divided into multiple fire compartments for spatial separation purposes, supplemental information and more comprehensive spatial separation details may need to be submitted. In these cases, select “see attached detailed spatial separation information” from the drop-down list, and include the additional information with the permit submission.

For simplified spatial separations, select from the drop down lists the applicable OBC Table used to determine the maximum percentage of unprotected openings, and the Table used to determine the minimum construction requirements. Complete the table with the information noted for each column.