GUIDELINE FOR DETERMINATION OF CAPACITY FOR YOUR BUSINESS WHILE UNDER PUBLICH HEALTH ORDER RESTRICTIONS

MANITOBA CHAMBERS OF COMMERCE

INTRODUCTION:

The following calculations have been extracted from a bulletin issued by the Office of the Fire Commissioner developed to provide a general overview of the requirements of the Manitoba Fire Code 2011 (MFC) to determine occupant loads within existing buildings.

The occupant load or maximum occupancy is a useful tool in the determination of your allowable operating capacity while under restrictions of a current Public Health Order (PHO) during the COVID-19 State of Emergency.

The official Maximum Occupancy as listed on an Occupancy Permit or as calculated via the methods detailed below thereby mathematically provide a ceiling under which a business is required to (at minimum) reduce occupancy to a % of this capacity as regulated by a PHO.

Additional criteria a business must consider when determining their capacity while under restrictions is contingent on the nature of their business, and the layout of their space as the business must also implement measures to ensure that members of the public can reasonably maintain a separation of at least two metres from others.

The governing bodies in Manitoba that have jurisdiction to issue Occupancy Permits and determinations on capacity restrictions are:

- Your Municipality,
- Your Local Planning District
- Your Local Office of the Fire Commissioner (OFC),

If your business is not currently in possession of a permit or certificate from any of these 3 regulatory bodies then the following calculations can be used as one step in your determinations of what this number is based on the limitations currently enforced by the PHO.

DEFINITIONS:

Occupant load refers to the number of people permitted in a building at one time based on the building's floor space and function with additional consideration placed on the on the means of egress.

Maximum occupancy refers to the maximum number of people permitted in a room measured per foot in correlation with the number of available exits, with each exit accommodating only a certain number of people before bottlenecking occurs. (The Manitoba Fire Code (MFC) stipulates that the upper limit cannot exceed 0.4 m2 per person.)

A means of egress is a continuous and unobstructed way of exit travel from any point in a building or structure to a public way and consists of three separate and distinct parts: the way of exit access; the exit; and the way of exit discharge.

HOW TO CALCULATE THE MAXIMUM OCCUPANT LOAD (CAPACITY) OF YOUR BUSINESS

Applicable MFC Requirements:

2.7.1.3. Occupant Load

1) The maximum permissible *occupant load* for any room shall be calculated on the basis of the lesser of:
   a) 0.4 m2 of net floor space per occupant, or
   b) the *occupant load* for which *means of egress* are provided.
2) The number of occupants permitted to enter a room shall not exceed the maximum *occupant load* calculated in conformance with Sentence (1).

Net floor space referred to in Clause (a) is the floor space in a room excluding areas occupied by structural features and fixtures, such as tables, furnishings or equipment and other objects that may be in the floor area. In certain assembly occupancies, where the number and type of furnishings may change according to the nature of the function taking place, it may be appropriate to calculate maximum occupant loads for each of the different functions anticipated.

Calculations:

Total Gross Area of the room: _____ m2

Less:

Aisles, circulation in front of washrooms/bars (1.1 meter aisle width) _____ m2
Areas behind the serving counters, fixtures, and displays_____ m2
Structural elements/ or other _____ m2
Music booths, stages, dance floors, storage _____ m2
Tables, etc. _____ m2

"Net Floor Area" __square meters (m2) *divided by* 0.4 (m2) =_____Max. Occupancy Load

You then must determine available exit capacity:

This is the total width of cumulative exits available to the occupants that is measured in millimeters.

Total exit width__(mm) *divided by*_____(the required factor below) =_____max occupant load

Factors to be used:

A.	Exits at grade level or with ramps and slope is less than 1:8	÷	6.1 mm/ person
B.	Exits served by stairs at any point along egress	÷	8.0 mm/ person
C.	Exits served by stairs <900 mm in width	÷	9.2 mm/ person

Example:

Gross Floor Area = 36m x 22m = 792m²
Net Floor Area = 792m² - 320m² = 472m²
472m² ÷ 0.4m² = 1,180
Max Occupant Load = 1,180 people

Front Entrance Doors (grade level) = 1,625mm Rear Exit Doors (grade level) = 850mm

1625mm + 850mm = 2,475mm
2475mm ÷ 6.1mm = 405.7
Max Occupant Load = 405 people

Maximum occupant load is based on the lesser of the two calculations and thus for this example Occupant Load is 405 persons.

WHAT DOES THIS MEAN?

Depending on the specific Public Health Order restrictions in place, what this calculation and/or any existing Occupancy Permits provides, is a firm number to use as a ceiling when your business is developing your operating plan **based on a % capacity, AND** implementing measures to ensure that members of the public attending the store are reasonably able to

maintain **a separation of at least two metres** from each other as stipulated under the current Public Health Order.

NOTE: that under the current Public Health Orders issued in Manitoba the % capacity restriction does not include employees.

PRACTICAL EXAMPLE:

The public health order as written states:

5(1) A retail business may open if the operator of the business

(a) limits the number of members of the public at the business to 25% of the usual capacity of the premises or 250 persons, whichever is lower; and

(b) implements measures to ensure that members of the public at the business are reasonably able to maintain a separation of at least two metres from other members of the public.

Thus: 405 persons x 25% = 101 persons (before taking into consideration social distancing requirements)

It is the word 'usual' within the Public Health Order that causes problems with interpretation. Most businesses are not operating at Maximum Occupancy on a regular basis so the business owner is then left to ascertain at what occupancy levels they can operate at in keeping with the Public Health Order requirements mandating a percent of capacity ceiling AND a separation of at least 2 meters from other members of the public.

What the calculations and/or the Occupancy Permits provides, is a place to start when a business is developing their operating plan based on 25% capacity, taking both factors into consideration as stipulated under the current Public Health Order.

For example, depending on aisles, available floor space or obstructions a business owner may determine that 70 persons is the appropriate number based on 25% capacity restrictions AND social distancing requirements.

SOURCE OF MAXIMUM OCCUPANCY CALCULATIONS:

Office of the Fire Commissioner
Building and Fire Safety Section
OFC 21-001
Date Issued: January 28, 2021
508-401 York Avenue Winnipeg Manitoba R3C 0P8 T: (204) 945-3322
F: (204) 948-2089
Toll Free: 1-800-282-8069 (in Manitoba only) Website: www.firecomm.gov.mb.ca

NOTE: The information provided in this bulletin from the Office of the Fire Commissioner reflect basic requirements. Buildings that are more complex may require the assistance of a professional skilled in the interpretation of the building and fire codes or additional guidance from your local Public Health Officer.