Office *of the* Fire Commissioner

Building & Fire Safety Section

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Information Bulletin
Guideline for Determination of Occupant Load

This bulletin has been developed to provide a general overview of the requirements of the Manitoba Fire Code 2011 (MFC) to determine occupant loads within existing buildings. The MFC is not a design calculation, but a means to determine the maximum number of people that can safely be accommodated in the floor area.

The MFC uses two calculations to determine occupant load in existing buildings. Net floor space to allow people to move to an exit, and exit capacity. The lowest calculated number is the maximum permissible occupant load.

Note: A floor area with only one exit door is limited to an occupant load of 60 Persons per Manitoba Building Code 3.4.2.1 (2) and in compliance with MFC 2.7.1 means of egress.

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 m^2 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.

The information provided in this bulletin are basic requirements. Buildings that are more complex may require the assistance of a professional skilled in the interpretation of the building and fire codes.

For further assistance, please contact your local municipal building or fire inspector.

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Calculations:

Total Gross Area of the room: _____ m^2

Less:

Aisles, circulation in front of washrooms/bars (1.1 meter aisle width)	_____ m^2
Areas behind the serving counters, fixtures, displays	_____ m^2
Structural elements/ or other	_____ m^2
Music booths, stages, dance floors, storage	_____ m^2
Tables, etc.	_____ m^2

"*Net Floor Area*" ____square meters (m^2) ***divided by*** 0.4 (m^2) = ____ **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.

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