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GENERAL REQUIREMENTS

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SECTION 3

GENERAL REQUIREMENTS

301 GROUP CLASSIFICATION BY USE AND OCCUPANCY

301.1 Basis of Classification

Certificates of use and occupancy shall be based on the following group classification subject to the special provisions of 306 of this Code and provided that:

- (a) Any building having a use or occupancy not specifically mentioned shall be classified in the group it most nearly resembles.
- (b) Different buildings on the same property shall be certified separately for use and occupancy even when constructed under one permit.
- (c) Adjoining parts of the same building may be certified separately for different use and occupancy provided the division between them satisfies the fire resistance requirements of this Code for the most restrictive use.
- (d) More than one use and occupancy shall be permitted in any building without division provided the building conforms to the requirements of this Code for the most restrictive use.

301.2 Group A. Public Buildings

Being buildings in which 50 or more persons regularly congregate for civic, educational, religious, social or recreational purposes and including:

Assembly halls
Auditoria
Cinemas
City and town halls
Clubs, excluding residential accommodation
Court-houses
Dance halls
Permanent exhibition buildings
Games buildings
Lecture halls
Passenger assembly buildings
Public baths
Public art galleries, libraries and museums
Restaurants seating 50 or more persons
Religious buildings of all types
Teaching facilities of all types

301.3**Group B. Institutional Buildings**

Being buildings in which inmates' liberties are restricted for civic, medical, charitable or correctional purposes including:

- (a) Asylums
Hospitals
Infirmaries
Old and handicapped persons homes
Sanatoria
- (b) Prisons
Reformatories

301.4**Group C. Commercial and Industrial Buildings**

Being buildings used for manufacture, assembly, servicing, repair and factory operations or for the storage except for display purposes of materials or finished products where no hazardous processes or materials are involved and including:

- (a) Aeroplane hangers
Cold storage buildings
Freight depots
Parking garages
Warehouses
- (b) Factories
Commercial laboratories
Laundries
Processing plants
Power stations
Telephone exchanges
Workshops

301.5**Group D. Office, Administrative and Retail Service Buildings**

Being buildings used for business or professional transactions or the display or sale of materials or finished products and including:

- (a) Banks
Civic administration buildings
Radio stations
Restaurants seating less than 50 persons
Television stations
Office buildings
- (b) Markets, Supermarkets
Shops
Showrooms
Stores

301.6**Group E. Residential Buildings**

Being all buildings in which sleeping accommodation is a necessary or major provision, except buildings classified under Group B in 301.3 of this Code and including:

- (a) Apartment buildings containing less than 10 apartments.
Guest houses accommodating less than 25 persons.
Private residences and duplex buildings.
Residential club accommodation for less than 25 persons.
Terrace houses.
- (b) Apartment buildings containing 10 or more apartments.
Guest houses accommodating 25 or more persons.
Halls of residence.
Hotels.
Motels.
Residential club accommodation for more than 25 persons.
- (c) Tenement buildings.
Dormitories.

301.7**Group F. Hazardous Occupancy Buildings**

Being buildings or parts of buildings for the storage or handling or use or processing of any of the hazardous materials or for the housing or carrying out of any of the hazardous processes listed and attached to this Code as Appendix D, or buildings used for any other purpose which, in the opinion of the Director, creates hazardous or noxious conditions.

302**OCCUPANCY CONTENT OF A BUILDING****302.1****Basis of Calculation**

- a) Table 3-1 shall determine the number of persons occupying a building or part of a building subject to the special provisions of 306 of this Code, and except the building or part of the building be planned for a greater number persons than that determined from Table 3-1 then the greater number shall be used, and any enclosed space or room which 50 or more persons regularly congregate shall be considered a place of public assembly regardless of the group classification of the building.
- b) Appendix H provides information on the specific requirements of the Occupancy Groups. This appendix is included for guidance to designers. However Table 3-1 must be used to determine the minimum occupancy content of buildings. Designers of public buildings should apply to the Director for permission to alter any of the minimum areas given in the

Table 3-1, where there is mixed occupancy or doubt as to the appropriate area to be used.

Table 3-1

Occupancy Content of a Building

Places of public assembly in any building	1 person for each seat, (7 sq.ft required). For the occupancy content of other assembly buildings see Appendix H (1) Section 5.
Group A. Public buildings generally, Restaurants, night clubs	1 person for each 100 sq.ft of floor area. 1 person for each 12 sq ft. (net).
Group B. Institutional buildings generally Hospital surgical and obstetrical areas	Group B (b): 1 person for each 100 sq.ft of floor area. 1 person for each 120 sq.ft. of floor area.
Group B Institutional buildings: open wards and dormitories	1 person for each 50 sq.ft. of area.
Group C Commercial and industrial buildings	Group C (a): 1 person for each 200 sq.ft. of floor area for the first 5 persons and 1 person for each 1,000 sq.ft of floor area thereafter Group C (b): 1 person for each 50 sq.ft. of floor area for the first 10 persons, 1 person for each 100 sq.ft of floor area for the next 10 persons, and 1 person for each 500 sq ft. of floor area thereafter.
Group D. Offices, administrative and retail service buildings	Group D (a): 1 person for each 100 sq.ft of floor area Group D (b): 1 person for each 50 sq. ft of sales floor area plus 1 person for each 100 sq.ft. of non sales floor area.
Group E. Residential	Group E (a): 1 person for each 300 sq.ft of floor area Group E (b): 1 person for each 150 sq.ft. of floor area Group E (c) 1 person for each 50 sq.ft. of floor area.
Group F. Hazardous occupancy	1 person for each 50 sq ft of floor area for the first 10 persons, 1 person for each 500 sq.ft. of floor area thereafter

303

TYPE CLASSIFICATION BY CONSTRUCTION

303.1

General

- a) The requirements of Types of Construction in this Sub-section are minima for the various Types of Construction and are intended to represent varying degrees of public safety and resistance to fire. For the purpose of this Code, Type I shall be

deemed to be the most fire-resistive and Type 5 the least fire-resistive Type of Construction.

- b) All buildings and structures shall be classified into one of the following Types of Construction:

Type I Buildings:	Fire Resistive
Type 2 Buildings:	Semi-fire Resistive
Type 3 Buildings:	Ordinary Masonry (Protected and Unprotected)
Type 4 Buildings:	Noncombustible
Type 5 Buildings:	Wood Frame

Appendix I provides more information on the specific requirements for each Type.

- c) In order that a building or structure may be classified in any specific Type of Construction, it is necessary that all the requirements for that Type shall be at least equalled. No building or portion thereof shall be required to conform to the details of a Type of Construction higher than that Type for which the minimum requirements based on Occupancy are met even though certain features of such building actually conform to a higher Type of Construction.
- d) Where specific materials, Types of Construction or fire-resistive protection are required, such requirements shall be the minimum requirements, and any materials Types of Construction or fire-resistive protection which will afford equal or greater public safety or resistance to fire, as specified in this Code, may be used, subject to the requirements of Sub-sections 401 and 402 of this Code covering alternate materials and construction standards.
- e) Where two or more Types of Construction occur in the same building and are separated by firewalls as required in the Chapters of Occupancy, each portion so separated may be classified as of the Type of Construction to which it conforms. If firewalls are not provided as required in Sub-section 406.3, the whole building shall be classified as the least fire-resistive Type of Construction used and shall be subject to the restrictions imposed upon that Type.
- f) The structural frame shall be considered to be the columns and the girders, beams, trusses and spandrels having direct connections to the columns and all other members which are essential to the stability of the building as a whole. The members of floor or roof panels which have no connection to

the columns shall be considered secondary members and not a part of the structural frame.

- g) Minor accessory buildings of unprotected non-combustible materials not exceeding 10 percent of the ground floor of the primary building, nor 1,500 square feet, whichever is larger, may subject to the specific approval of the Authority, where separated from the primary building as required in the Code, be constructed without changing the fire-resistive classification of the primary building based on Type of Construction.

303.2 Existing Buildings

An existing building which by its construction cannot be definitely classed as of Type 1, 2, 3, 4 or 5 as defined in this Code shall be defined for the purpose of this Code, by the Director.

303.3 Abbreviations

For the purpose of 303 and in interpretation of Table 3-2 the following abbreviations shall have the meanings given to them hereunder:

FRC	Fire resistance rated construction containing combustible materials
FRTW	Fire resistance rated and fire retardant treated wood
FRW	Fire resistance rated wood
N/A	Not applicable
NFR	Fire resistance rated construction of non-combustible materials
NM	Non-combustible materials
PS	Fire resistance rated protected structural steel
RC	Fire resistance rated reinforced concrete
TW	Fire retardant treated wood
W	Unrated untreated wood

303.4 Basis of Classification

Table 3-2 shall be used to establish Type classification by construction of a building subject to the special provisions of 306 of this Code and provided that where any building does not clearly fall into one of the five Types defined it shall be classified under the most restrictive of the Type it resembles.

304.1 Abbreviations

For the purpose of 304 and in interpretation of Table 3-3 the following abbreviations shall have the meaning given them hereunder:

Group: Group classification by use and occupancy under 301 of this Code

NL: No limit

NP: Not permitted

Type: Type classification by construction under 303 of this Code.

SS: Single storey

MS: Multi-storey

304.2 Basis of Determination

Table 3-3 shall determine the maximum permitted area and height of a building subject to the special provisions of this Code and provided that where two or more parts of a building are separated from one another by divisions satisfying the fire resistance requirements of this Code for the most restrictive use, then the maximum permitted areas may be applied to each part so divided.

305.1 Basis of Determination

Tables 3-4 to 3-7 inclusive shall determine the minimum fire resistance ratings for the component parts of a building subject to the special provisions of 306 of this Code and provided that the permitted fire resistance ratings of various materials and combinations of materials shall be established in accordance with this Code.

306.1 Interpretation

The requirements of 306 are to be read and interpreted with 301 to 305 of this Code provided that if the requirement of two or more sections should appear contradictory when applied to a particular building, the more restrictive requirements shall apply.

306.2 General Occupancy

- (a) Any building with an occupancy content of more than 1,000 persons as calculated from Table 3-1 shall be of Type 1 construction.

- (b) No building of Group A: Table 3-1 with an occupancy content of more than 250 persons as calculated from Table 3-1 shall be of Type 4 or 5 construction.

306.3

Hazardous Occupancy

- (a) Buildings used to store highly combustible or highly inflammable materials or liquids shall be of Type 1 or 2 construction, not more than 12' 0" in storey height, not closer than 50' 0" to a site boundary or to an adjacent building on the same site and divided by fire division walls into separate parts, each part not exceeding 5,000 sq. ft. in floor area.
- (b) Buildings housing processes using combustible or inflammable liquids with a flash point lower than 190 degrees F shall be of Type 1 or 2 single storey construction not closer than 50' 0" to a site boundary or to an adjacent building on the same site and shall be separated by fire division walls into separate parts, each part not exceeding 10,000 sq.ft. in floor area.

306.4

Areas, Heights and Volumes

- (a) A building of Type 1 construction more than 100'-0" high may be required to have higher fire resistance rating for any or all of the component parts and the whole or any part of the building shall be equipped with wet and/or dry risers if required by the Director. These risers and fittings shall be subjected to an acceptance test and be certified by the Director.
- (b) The permissible areas given in Table 3-3 may be increased by 25 percent for any building having clear access to public streets on two sides.
- (c) The permissible area given in Table 3-3 may be increased by 50 percent for any building having clear access to public streets on three or more sides.
- (d) The permissible areas given in Table 3-3 may increased by 100 percent for any multi-storey building equipped with an approved automatic sprinkler system where such system is not specifically required by this Code.
- (e) The permissible areas given in Table 3-3 may be increased by 200 percent for any single storey building equipped with an approved automatic sprinkler system where such system is not specifically required by this Code.
- (f) Any building more than 250,000 cu.ft in volume shall, unless equipped with an approved automatic sprinkler system be divided by fire division walls, fire division floors, and or ceilings, into parts not exceeding 250,000 cu.ft.in. volume.

306.5**Special Fire Resistance Ratings**

- (a) In buildings of Groups A, C, D, and E, not more than 50'0" high and not closer than 50'0" to a site boundary or to an adjacent building on the same site, non-load-bearing exterior walls may be of non rated combustible materials.
- (b) Suspended ground floors with less than 3'0" clearance need not be of fire resistance rated construction for Groups A and E. For Types 1,2 and 4, construction shall be of non-combustible materials.
- (c) Roofs, where every part of the structural framework is more than 20'0" above the highest part of any floor, need not be of fire resistance rated construction, but for Groups A and F, and for Types 1,2 and 4 construction shall be of non-combustible materials.
- (d) Untreated wood or other combustible materials may be used only for wall and floor finishes, skirtings, window sills, wall trims, staircase handrails and other minor non-structural decorative purposes.

NOTE:

Untreated wood should not be used as wall finishes or handrails on escape routes.

Table 3-2

Type Classification by Construction

Item	Type 1 Fire resistant	Type 2. Semi-fire resistant	Type 3. Ordinary Masonry	Type 4. Non-combus- tible	Type 5. Wood frame
Exterior structural	RC or PS	RC or PS	RC or PS	NFR, FRTW	NFR
Interior structural frame	RC or PS	RC or PS	NFR or FRTW	NM	NM or TW
Exterior load bearing walls	NFR	NFR	NFR	NFR	NFR or FRTW
Exterior non-load bearing walls	NFR	FRC or NFR	FRW	NFR	FRC or FRW
Interior load bearing walls	NFR	NFR	NFR or FRTW	NM	NM or FRW
Party walls and fire division walls	NFR	NFR	NFR	NFR	NFR or FRW
Interior walls enclosing vertical openings in buildings more than 1 storey high	NFR OR FRTW	NFR or FRTW	FRC or FRTW	NFR	FRC or FRW
Interior walls and/or doors facing on to a means of escape	NFR OR FRTW	NFR	FRC or FRTW	NFR or FRW	FRC or FRW
Fire division floors	NFR	NFR	NFR	NFR	NFR or FRW
Other floors	NFR	NFR OR FRTW	Group C, NFR or FRW Other Groups, NM OR TW	NM	NM or W
Roofs	NFR OR FRTW	NFR OR FRTW	NFR OR FRTW	NM	NFR OR FRTW
Cantilevered projections	NFT	NFR OR FRTW	NFR OR FRTW	NFR	NFR OR FRTW

Note: See 303.3 for abbreviations used

Table 3-3

Permissible Areas and Heights

Group	Areas and Heights	Type 1. Fire resistant	Type 2. Semi-fire resistant	Type 3. Ordinary masonry	Type 4. Non-combustible	Type 5. Wood frame
Group A	Area per storey	NL	15,000	10,000	10,000	10,000
	Height (ft)	100	60	SS	SS	SS
Group B	Area per storey	NL	10,000	7,500	NP	NP
	Height (ft)	100	60	35	NP	NP
Group C	Area per storey	NL	NL for SS 20,000 for MS	15,000	15,000	10,000
	Height (ft)	100	60	35	SS	SS
Group D	Area per storey	NL	20,000	15,000	15,000	10,000
	Height (ft)	100	60	35	SS	SS
22222Group E	Area per storey	NL	15,000	10,000	7,500	7,500
	Height (ft)	100	60	35	25	25
Group F	Area per storey	15,000	10,000	7,500	5,000	NP
	Height (ft)	60	25	SS	SS	NP

Note: See 303.3 for abbreviations used

Table 3-4

Fire resistance ratings in hours for buildings within 10'0" of site boundaries or adjacent buildings on the same site

Item	Type 1. Fire resis- tant	Type 2. Semi-fire resistant	Type 3. Ordinary Masonry	Type 4. Non- combustible	Type 5. Wood frame
Exterior structural frame	4	3	2	2	1
Interior structural frame	3	1	1	SS: 1/2 MS: 1	SS 1/2 MS: 1
Exterior load bearing walls	4	2	2	2	1
Exterior non-load bearing walls	3	2	2	1	1
Interior load bearing walls	2	1	1	SS: 1/2 MS: 1	SS: 1/2 MS: 1
Party walls	4	3	3	3	2
Fire division walls	3	2	2	2	1
Interior walls enclosing vertical openings in buildings more than 1 storey high	2	1	1	1	1
Interior walls and/or doors facing on to means of escape	1	1/2	1/2	1/2	1/2
Interior walls not otherwise described	Groups A & D only: 1/2	Groups A & D only: 1/2	0	0	0
Fire division floors and/or ceilings	3	2	2	2	1
Other suspended floor and/or ceilings	2	1	1	1	1
Roofs	2	1	1	SS: 1/2 MS: 1	SS: 1/2 MS: 1
Cantilevered projections	3	2	2	1	1
Fire check doors	1	1/2	1/2	1/2	1/2

Note: See 303.3 for abbreviations used

Table 3-5

**Fire resistance rating in hours for buildings between 10'0" and 20'0" from
site boundaries or adjacent buildings on the same site.**

Item	Type 1. Fire resistant	Type 2. Semi-fire resistant	Type 3. Ordinary masonry	Type 4. Non- combustible	Type 5. Wood frame
Exterior structural frame	3	2	1	1	1
Interior structural frame	2	1	1	SS: 1/2 MS: 1	SS: 1/2 MS: 1
Exterior load bearing walls	3	2	1	1	1
Exterior non-load bearing walls	2	1	1	1	1
Interior load bearing walls	2	1	1	SS: 1/2 MS: 1	SS: 1/2 MS: 1
Fire division walls	3	2	1	1	1
Interior walls enclosing vertical opening in build- ings more than 1 storey high	2	1	1	1	1
Interior walls facing on to means of escape	1	1/2	1/2	1/2	1/2
Interior walls not other- wise described	Groups A & D only: 1	Groups A & D only: 1/2	0	0	0
Fire division floors and/or ceilings	3	2	1	1	1
Other suspended floors - and/or ceilings	2	1	1	1	1
Roofs	2	1	1	SS: 1/2 MS: 1	SS: 1/2 MS: 1
Cantilevered projections	2	1	1	1	1
Fire check doors	1/2	1/2	1/2	1/2	1/2

Table 3-6

**Fire resistance ratings in hours for buildings over 20'0" from site boundaries
or adjacent buildings on the same site and more than 35 '0" high.**

Item	Type 1. Fire resistant	Type 2. Semi-fire resistant	Type 3. Ordinary masonry	Type 4. Non- combustible	Type 5. Wood frame
Exterior structural frame	2	2	N/A	N/A	N/A
Interior structural frame	2	1	N/A	N/A	N/A
Exterior load bearing walls	2	2	N/A	N/A	N/A
Exterior non-load bearing walls	2	1	N/A	N/A	N/A
Interior load bearing bearing walls	2	1	N/A	N/A	N/A
Fire division walls	2	2	N/A	N/A	N/A
Interior walls enclosing vertical opening in buildings more than 1 storey high	1	1	N/A	N/A	N/A
Interior walls not otherwise described	Groups A & D only, 1/2	Groups A & D only, 1/2	N/A	N/A	N/A
Fire division floors and/or ceilings	2	1	N/A	N/A	N/A
Roofs	2	1	N/A	N/A	N/A
Fire check doors	1/2	1/2	N/A	N/A	N/A

Table 3-7

Fire resistance ratings in hours for buildings over 20'0" from site boundaries
or adjacent buildings on the same site and up to 35' 0' high

Item	Type 1. Fire resistant	Type 2. Semi-fire resistant	Type 3. Ordinary masonry	Type 4. Non-combus- tible	Type 5. Wood frame
Exterior structural frame	2	1	1	1	1
Interior structural frame	1	1	1	SS 1/2 MS: 1	SS: 1/2 MS: 1
Fire division walls	2	2	1	1	1
Interior walls enclosing vertical openings in build- ings more than 1 storey high	1	1	1	1	1
Interior walls facing on to a means of escape	1/2	1/2	1/2	1/2	1/2
Fire division floors and/or ceilings	2	2	1	1	1
Other suspended floors - and/or ceilings	1	1	1	1	1
Roofs	1	1	1	SS: 1/2 MS: 1	SS: 1/2 MS: 1
Cantilevered projections	1	1	0	0	0
Fire check doors	1/2	1/2	1/2	1/2	1/2