

PART III**Chapter 2****Classification of Buildings Based on Occupancy****2.1 Occupancy Classification**

2.1.1 Every building or portion thereof and land-use shall be classified according to its use or the character of its occupancy as a building of Occupancy A, B, C, D, E, F, G, H, I, J, K, L or M as defined below:

Occupancy A:	Residential
Occupancy B:	Educational
Occupancy C:	Institution for care
Occupancy D:	Health Care
Occupancy E:	Business
Occupancy F:	Mercantile
Occupancy G:	Industrial
Occupancy H:	Storage
Occupancy I:	Assembly
Occupancy J:	Hazardous
Occupancy K:	Garages
Occupancy L:	Utilities
Occupancy M:	Miscellaneous

2.1.2 Utilities under Occupancy L is incidental to operation in all other type of occupancy except Occupancy J shall be considered as non-separated use of the main occupancy but shall be taken special safety measure as per provision of this Code.

2.1.3 Any occupancy or use type not mentioned specifically in Table 3.2.6 (A-Z list) or elsewhere in this Code shall be classified by the Board of Appeals under the occupancy group to which its use most closely resembles, considering the life safety and fire hazard.

2.1.4 Each occupancy group shall be subdivided as detailed in the following sections. The detail classification including mixed occupancy provided in the Table 3.2.6 (A-Z list) is non-exhaustive. If there is any use or character of occupancy in a building which is not mentioned here, it shall be classified as per provision of Sec 2.1.3 of this Chapter.

2.1.5 Occupancy A: Residential Buildings

This occupancy type shall include any building or portion thereof providing sleeping and living accommodations to related or unrelated groups of people, with or without independent bathroom, cooking or dining facilities, except any building classified under Occupancy C or D. This Occupancy shall be subdivided as follows:

2.1.5.1 Single Family Dwelling (A1)

These shall include any building, row type or semi-detached or detached from neighboring buildings by distances required by this Code and having independent access to the plot, which is used as private dwelling by members of a single family.

2.1.5.2 Two Family Dwelling (A2)

These shall include any building, row type or semi-detached or detached from neighboring buildings by distances required by this Code and having shared or independent access for two families and having facilities for living, cooking and bathroom facilities independent of each other.

2.1.5.3 Flats or Apartments (A3)

These shall include any building or portion thereof which is provided for more than two families, having facilities for living, cooking and bathroom facilities independent of each other.

2.1.5.4 Mess, Boarding Houses, Dormitories and Hostels (A4)

These shall include any building or portion thereof in which sleeping, living accommodations and bathroom are provided for groups of related or unrelated persons, with or without common dining and facilities, and with common cooking under single management control or with individual or group cooking facilities.

2.1.5.5 Hotels and Lodging Houses (A5)

These shall include any building, a portion thereof or group of buildings under single management, in which sleeping, living accommodation and bathroom facilities are provided with or without dining facilities but without cooking facilities for adult individuals, is provided for hire on transient or permanent basis.

2.1.6 Occupancy B: Educational Facilities

This occupancy type shall include any building or portion thereof in which education, training and care are provided to children or adults. This Occupancy shall be subdivided as follows:

2.1.6.1 Educational Facilities up to Higher Secondary Level (B1)

These shall include any building or portion thereof used for purposes involving assembly for instruction, education and recreation of more than six persons on regular basis to fulfil the requirement of an academic curriculum approved by the Government up to Higher Secondary (12th Grade), and which is not covered by occupancy I.

2.1.6.2 Facilities for Training and for Above-Secondary Level (B2)

These shall include any building or portion thereof used for purposes involving assembly for instruction, education, training and recreation of more than six persons, and which is not covered by occupancy I and B1.

2.1.6.3 Pre-School Facilities (B3)

These shall include any building or portion thereof used for purposes involving care, recreation and education of children more than six in number, who have not yet reached the age to attend the school.

2.1.7 Occupancy C: Institution for Care

Buildings classified under this occupancy shall include those used for purposes of institutional care of the occupants, such as detention for correctional or penal purposes, medical or nursing care of persons suffering from illness or infirmity due to mental condition, or accommodation of children or minor, where the personal liberty of the inmate is restricted. These buildings shall ordinarily provide accommodation for sleeping, dining and other provisions approved by the authority for the occupants. This occupancy shall be subdivided as follows:

2.1.7.1 Institution for Care of Children (C1)

These shall include any building or portion thereof or group of buildings under single management used as an institution for the full time care of children or minor, each providing accommodation for sleeping, dining and other provisions approved by the authority for more than six children.

2.1.7.2 Custodial Institution for Physically Capable Adults (C2)

These shall include any building or portion thereof or group of buildings under single management used for purposes of full time care and custody of adult or mentally disabled persons but physically capable of responding to emergency.

2.1.7.3 Custodial Institution for the Incapable Adults (C3)

These shall include any building or portion thereof or group of buildings under single management used for purposes of full time care and custody of persons physically or mentally incapable of responding to emergency.

2.1.7.4 Penal and Mental Institution for Children (C4)

These shall include any building or portion thereof or group of buildings under single management used for housing children under restraint, or who are detained for penal and corrective purposes, in which personal liberty of the inmates is restricted.

2.1.7.5 Penal and Mental Institution for Adults (C5)

These shall include any building or portion thereof or group of buildings under single management used for housing persons under restraint, or who are detained for penal and corrective purposes, in which personal liberty of the inmates is restricted.

2.1.8 Occupancy D: Health Care Facilities

Buildings under this Occupancy group shall include those used for purposes of providing medical care, diagnostic facilities and treatment to persons suffering from physical discomfort, in which sleeping accommodation may or may not be provided. This Occupancy shall be subdivided as follows:

2.1.8.1 Normal Medical Facilities (D1)

These shall include any building or portion thereof or group of buildings under single management in which essential medical facilities having surgery, emergency and casualty treatment facilities, general or specialized medical and other treatment are provided to persons suffering from physical discomfort.

2.1.8.2 Emergency Medical Facilities (D2)

These shall include any building or portion thereof used for purposes of providing essential medical facilities having surgery, emergency, casualty treatment facilities, general or specialized medical and other treatment is provided to persons suffering from physical discomfort. This Type shall be equipped and designated to handle post disaster emergency, by construction it is required to remain operational during and after disasters, built as a part of disaster preparedness program.

2.1.9 Occupancy E: Business

These shall include any building or portion thereof which is used for any business transaction other than mercantile. This Occupancy shall be subdivided as follows:

2.1.9.1 Office (E1)

These shall include any building or part thereof which is used for paper works, documentations, only display of samples of Products but not for direct sale, maintaining accounts and records for administrative or consulting services, banking or activities for business purposes and professional training.

2.1.9.2 Research and Testing Laboratories (E2)

These shall include any building or portion thereof which is used as research establishment and/or test laboratory involving hazardous materials within the limit of exempted quantity permitted in this Code.

2.1.9.3 Essential Services (E3)

These shall include any building or portion thereof used for purposes of providing emergency services and utilities which are required to remain operational during and after a disaster or other emergency situations.

2.1.10 Occupancy F: Mercantile

This occupancy type shall include any building or portion thereof or group of buildings which is used for display and sale of merchandises. This Occupancy shall be subdivided as follows:

2.1.10.1 Small Shops and Market (F1)

These shall include any building or portion thereof with an area divided or undivided not exceeding 300 m², used for purposes of display and sale of merchandise, either wholesale or retail, with or without incidental storage and service facilities.

2.1.10.2 Large Shops and Market (F2)

These shall include any building or portion thereof with an area divided or undivided more than 300 m² used for purposes of display and sale of merchandise, either wholesale or retail, with or without incidental storage and service facilities.

2.1.10.3 Refueling Station (F3)

These shall include any building or portion thereof used for providing refueling and maintenance without repair services for automobiles which is moderately hazardous in nature.

2.1.11 Occupancy G: Industrial Buildings

Buildings under this Occupancy shall be subdivided on the basis of hazard potential of the contents and the processes of the industry. The hazard shall generally mean the relative danger of the start of fire and the rapidity of its spread, the danger of smoke and gases generated that pose a potential threat to the safety of the occupants of the building. Unless areas with different degrees of hazard are effectively segregated and separated in accordance with the provisions of this Code, the most hazardous area in a building shall govern its classification. This occupancy shall also include facilities for public utility services at the producer or distributor's end that deals with generation and distribution of utility facilities. Any such building or portion thereof, which is not using hazardous material quantified and categorized in occupancy group J, shall be subdivided as follows:

2.1.11.1 Low Hazard Industry (G1)

These shall include any industrial building in which the contents are of such low combustibility and the processes conducted therein are of such low hazardous nature that danger of self-ignition and self-propagation of fire is nonexistent, the only danger being an onset of fire from external sources with the resulting danger to life and property.

2.1.11.2 Moderate Hazard Industry (G2)

These shall include any industrial building in which the contents are moderately combustible and the industrial processes conducted therein are liable to give rise to a fire which will spread with moderate rapidity, giving off considerable smoke.

2.1.12 Occupancy H: Storage Buildings

Buildings under this Occupancy group shall include any building or portion thereof used primarily for storage or sheltering of goods, wares, merchandises, vehicles or animals. Any such building or portion thereof, which is not used for storing hazardous material quantified and categorized in occupancy group J, shall be subdivided as follows:

2.1.12.1 Low Fire-risk Storage (H1)

These shall include any building or portion thereof which is used for storage of materials or other contents which do not constitute the danger of self-ignition, and in the event of fire the rate of burning shall be less than moderate rapidity.

2.1.12.2 Moderate Fire-risk Storage (H2)

These shall include any building or portion thereof which is used for storage of materials which do not constitute the danger of self-ignition but which in the event of fire will burn with moderate rapidity.

Items which shall be deemed to render a building hazardous are specified in Sec 2.14.3 along with the exempted amount for each item.

2.1.13 Occupancy I: Assembly

Buildings under this Occupancy group shall include any building or portion thereof in which groups of people congregate or assemble for recreation, amusement, social, religious, political, cultural, travel and similar purposes. This Occupancy shall be subdivided as follows:

2.1.13.1 Large Assembly with Fixed Seats (I1)

This occupancy shall include a building or a portion thereof for assembly in a space provided with fixed seats for 1000 or more persons. Assembly buildings under this subdivision may be for theatrical, operatic performances or cinema projection having or not a raised stage, proscenium curtains, scenery loft or projection screen, lighting equipment, projection booth and necessary theatrical and mechanical equipment.

2.1.13.2 Small Assembly with Fixed Seats (I2)

This occupancy type shall include any building or portion thereof primarily meant for use as described for buildings under Occupancy I1, but with fixed seats for less than 1000 persons in a space. These assembly buildings may or may not be provided with a legitimate theatrical stage or related accessories or equipment.

2.1.13.3 Large Assembly without Fixed Seats (I3)

This occupancy type shall include any building or portion thereof for assembly in a space, in which there are no fixed seats, which may or may not be provided with a legitimate stage or theatrical accessories, and which has accommodation for 300 or more persons.

2.1.13.4 Small Assembly without Fixed Seats (I4)

This occupancy type shall include any building or portion thereof primarily intended for use as described in Occupancy I3, but with accommodation for less than 300 persons in a space.

2.1.13.5 Sports Facilities (I5)

This occupancy type shall include any building or portion thereof meant for assembly of spectators for recreational and amusement purpose mainly related to sports.

2.1.14 Occupancy J: Hazardous Buildings

Any Building or portion thereof used as storage, industrial, research and other facilities dealing with hazardous material in excess of exempted quantity defined in the Table 3.2.5 or any micro-biological facilities shall be categorized in this Occupancy group.

Definition of hazard and the amount of such materials which shall be deemed to render a building hazardous are set forth in Sec 2.14.3. This Occupancy shall be subdivided as follows:

2.1.14.1 Explosion Hazard Buildings (J1)

These shall include any building or portion thereof which is used for storage, handling, processing or manufacture of explosive materials and products that have explosion hazard.

2.1.14.2 Chemical Hazard Buildings (J2)

These shall include any building or portion thereof which is used for storage, handling, processing or manufacture of materials and products that are highly corrosive, toxic, poisonous and physically harmful including corrosive and toxic alkalis, acid or other liquids or chemicals, producing flame, fumes, radiation, and explosive, poisonous, irritant and corrosive gases.

2.1.14.3 Biological Hazard Buildings (J3)

These shall include any building or portion thereof which is used for storage, handling, processing or manufacture of materials and products that use biological processes and in which the risk of harmful biological threat to the occupants exist.

2.1.14.4 Radiation Hazard Buildings (J4)

These shall include any building or portion thereof which is used for storage, handling, processing or manufacture of materials and products that use nuclear and radioactive processes and in which the risk of radioactive contamination exists.

2.1.15 Occupancy K: Garage

These occupancy types shall include any building or portion thereof used one or more vehicles having containers of flammable liquid or compressed gas or carrying power or combination of any of these as a supply source for self-propelling are kept for use, sale, rental purpose, storage, repair, exhibition and all those floors of a building or portion thereof in which such vehicles are not separated by suitable cutoff to prevent fire spreading.

2.1.15.1 Parking Garage (K1)

This occupancy type shall include any building or portion thereof used solely for parking Motor Vehicles for a limited period of time.

2.1.15.2 Private Garage (K2)

This occupancy type shall include any building or portion thereof used as store of owner's or tenant's Motor Vehicles for private use for unlimited period of time.

2.1.15.3 Repair Garage and Showrooms (K3)

This occupancy type shall include any building or portion thereof wherein repair of electrical or mechanical system or denting or painting works of body is performed on any type of vehicles and includes associated floor spaces used as office, showrooms, incidental store and parking.

2.1.16 Occupancy L: Utility

This occupancy type shall include any building or portion thereof used to install any type of equipment to provide support service to any building or portion thereof or group of buildings of all occupancy groups and with special provisions for occupancy J.

This shall also include all public and private utility facilities of the consumer's end that are located within the consumer's site and all installations are required special care to ensure life and property safety as per provisions of this Code.

2.1.17 Occupancy M: Miscellaneous

Buildings under this Occupancy group shall include special buildings not covered in other Occupancy groups. These Occupancies shall be subdivided as follows:

2.1.17.1 Special Structure (M1)

Any building or structure which is neither listed in the A-Z list nor covered in any occupancy group provided in this Code but unique in character may be categorized in this occupancy by the Board of Appeals. Each and every individual M1 Structure shall be complied with NFPA or equivalent standards for the life and fire safety.

2.1.17.2 Fences, Tanks and Towers (M2)

These shall include fences and boundary walls over 1.5 m high, standalone structures for gravity water tank and towers for telecommunication, power distribution, air-traffic control terminal or observation towers.

2.2 Change of Use

2.2.1 Without prior permission from the Authorities having jurisdiction no change shall be made in the type of occupancy or use of any building that would place it in a different occupancy group or in a different subdivision of the same occupancy group. Such changes shall be permitted only when the land use and the building complied with the provisions of this Code and the laws of the land for such group of Occupancy.

2.3 Mixed Occupancy

2.3.1 The following occupancies shall not be required to designate as a separated occupancy classification from uses to which they are accessory any occupancy Group other than Occupancy Group J

- (a) Assembly rooms having a floor area not more than 75 m².
- (b) The administrative and clerical offices and similar offices not exceeding 25 Percent of the floor area of the major occupancy and not related to Hazardous Buildings as defined in Occupancy J.
- (c) Administrative offices, gift shops and other similar uses in Occupancy A provided the uses do not exceed 10 Percent of the floor area of the major occupancy.
- (d) Kitchens associated with a dining area.
- (e) Carports having at least two sides entirely open associated with Occupancy A.

2.3.2 Forms of Occupancy Separations

A building is permitted to have multiple occupancy type, each type of occupancy shall be in groups, which may have combination of different occupancies and shall be separated horizontally or vertically or both accordingly as specified in the Table 3.2.1.

2.3.3 Types of Occupancy Separation

The occupancy separations shall be classified as follows:

- (a) Four Hour Fire Resistive: The four hour fire resistive separation wall or slab shall have no unprotected openings therein and shall provide a fire resistance for at least four hour.
- (b) Three Hour Fire Resistive: The three hour fire resistive separation wall or slab shall provide a fire resistance of not less than three hour. The total width of all openings in separation wall of any one storey shall not exceed 25 Percent of the length of that wall in that storey and no single opening shall have an area greater than 12 m². The openings shall be protected with a fire resistance assembly doors or windows providing fire resistance of at least three hour.
- (c) In case of a floor slab having three hour fire resistance rating, the openings on floor slab shall be protected by vertical enclosures extended above and below such floor openings. The walls of such vertical enclosures shall be at least two hour of fire resistance. All openings in such enclosures shall be protected with fire assembly door or window having fire resistance rating of at least one and one-half hour.
- (d) Two Hour Fire Resistive: The two hour fire resistive separation shall be of a construction having a fire resistance rating of not less than two hour. All openings in such separations shall be protected with a fire assembly door or window of a fire protection rating of at least one and one-half hour.
- (e) One Hour Fire Resistive: The one hour fire resistive separation shall be of at least one hour fire protection construction. All openings in such separations shall be protected with a fire protection assembly door or window of at least one-half hour fire resistance.

Table 3.2.1: Fire Resistance Rating Requirements for Barrier Walls and Floor/Ceiling Assemblies between Separated Occupancies (hours)

	A1	A2	A3	A4	A5	B1	B2	B3	C1	C2	C3	C4	C5	D1	D2	E1	E2	E3	F1	F2	F3	G1	G2	H1	H2	I1	I2	I3	I4	I5	J1	J2	J3	J4	K1	K2	K3	L	M1	M2	
A1	NA	§																																							
A2	NA	1.5																																							
A3	NA	NA	2																																						
A4	NA	NA	2	2																																					
A5	NA	NA	2	2	2																																				
B1	NA	NA	2	2	2	2																																			
B2	NA	NA	2	2	2	2	2																																		
B3	NA	NA	2	2	2	2	2	2																																	
C1	NA	NA	3	3	3	3	3	3	2																																
C2	NA	NA	2	2	2	2	2	2	2	2																															
C3	NA	NA	3	3	3	3	3	3	2	2	2																														
C4	NA	NA	NP	NP	NP	NP	NP	NP	NP	NP	NP	2																													
C5	NA	NA	NP	NP	NP	NP	NP	NP	NP	NP	NP	2	2																												
D1	NA	NA	3	3	3	3	3	3	3	3	3	3	3	2																											
D2	NA	NA	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	2	2																										
E1	NA	NA	2	2	2	2	2	2	3	2	3	3	3	3	NP	3																									
E2	NA	NA	2	2	2	2	2	2	3	2	3	3	3	3	NP	2	2																								
E3	NA	NA	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3																							
F1	NA	NA	2	2	2	2	2	2	3	2	3	3	3	3	3	2	2	3	2																						
F2	NA	NA	2	2	2	2	2	2	3	2	3	NA	NA	3	3	2	2	3	2	2																					
F3	NA	NA	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	2																				
G1	NA	NA	2	2	2	2	2	2	3	2	3	3	3	3	NP	NP	NP	NP	NP	2	2	2	2																		
G2	NA	NA	3	3	3	3	3	2	3	3	3	3	3	3	NP	NP	NP	NP	3	3	3	3	2																		
H1	NA	NA	2	2	2	2	2	2	3	2	3	3	3	3	3	2	2	3	2	2	2	2	2	2																	
H2	NA	NA	3	3	3	3	3	2	4	3	4	4	4	4	4	3	3	3	2	3	3	3	3	3	2																
I1	NA	NA	2	2	2	2	2	2	3	2	3	3	3	3	3	2	2	2	2	2	NP	NP	NP	NP	NP	2															
I2	NA	NA	2	2	2	2	2	2	2	3	3	3	3	3	3	2	2	2	2	2	NP	NP	NP	NP	NP	2	2														
I3	NA	NA	2	2	2	2	2	2	2	2	3	3	3	3	3	2	2	2	2	2	NP	NP	NP	NP	NP	2	2	2													
I4	NA	NA	2	2	2	2	2	2	2	2	3	3	3	3	3	2	2	2	2	2	NP	NP	NP	NP	NP	2	2	2	2												
I5	NA	NA	2	2	2	2	2	2	2	2	3	3	3	3	3	2	2	2	2	2	NP	NP	NP	NP	NP	2	2	2	2												
J1	NA	NA	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	4	4	4	4	NP	NP	NP	NP	NP	4										
J2	NA	NA	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	4	4	4	4	NP	NP	NP	NP	NP	NP	4									
J3	NA	NA	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	4	4	4	4	NP	NP	NP	NP	NP	NP	NP	4								
J4	NA	NA	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	4	4	4	4	NP	NP	NP	NP	NP	NP	NP	NP	4							
K1	1	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	3	4	3	3	3	3	3	4	4	4	4	1						
K2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	2	2	2	2	2	4	4	4	4	1	1					
K3	NA	NA	NP	NP	NP	3	NP	3	3	3	NP	NP	3	3	3	3	3	3	3	3	3	3	4	3	4	3	3	3	3	NP	NP	NP	NP	1	1	1					
L	NA	NA	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	3	4	3	3	3	3	3	4	4	4	4	3	3	1				
M1	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	3	3	3	3	3	3	3	NP	NP	NP	3	3	3	3	NP	NP	NP	NP	3	3	3	3	1			
M2	1	1	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I		

§ NA = Not Applicable
† NP = Not Permitted

2.4 GENERAL REQUIREMENTS OF ALL OCCUPANCIES

2.4.1 Location on Property

2.4.1.1 All plots for building construction shall have access to a public road from at least one side.

2.4.1.2 Fire separation distance shall be measured from the face of peripheral wall of a building to the adjacent property line. For the purpose of this Section, if a public road adjoining all along a property line shall get the benefit of half of Road width as a part of Fire separation distance. For two or more buildings on the same plot, distances of imaginary lines equidistant from all side of buildings shall be considered as the required fire separation distances.

2.4.1.3 The exterior walls of a building shall have a fire resistance and opening protection as specified in Tables 3.3.1 (a), 3.3.1 (b) and 3.2.3.

2.4.1.4 Any outward projected elements from the peripheral wall of a building line shall be limited to the sunshade line.

2.4.1.5 When openings in exterior walls are required to be protected due to distance from the property line, the aggregate area of such openings shall not exceed 50 Percent of the total area of the wall in each storey.

2.4.1.6 Dwellings separation walls in semi-detached or row type development shall comply with Sec 2.4.3.

2.4.2 Allowable Floor Areas

2.4.2.1 The total area of the building shall comply with Sec 1.8.3 Chapter 1 of this Part.

2.4.2.2 The floor area of the mezzanines shall be included in the area of the respective main floor.

2.4.2.3 Floor area calculation shall be divided in to two: (a) All Floor areas at and above the formation level which shall be generally included in the FAR calculation. (b) Floor areas below the formation level shall generally be excluded in FAR calculation provided the Occupancy classifications remain within Utility or Private Garages.

Table 3.2.2: Fire Resistance Ratings in Hours of Exterior Walls for Various Occupancy Groups

Fire Separation Distance	Occupancy			
	A1, A2, K2 , M2	A3, A4, A5, B,C, D, E1, F1, F2, G1, I	E2, F3, F4, E3, G2, H1	H2, J
Up to 1.5 m	1	2	3	4
Greater than 1.5 m and up to 3 m	N	1	2	3
Greater than 3 m and up to 4.5 m	N	N	1	2
Greater than 4.5 m and up to 9 m	N	N	N	1
Greater than 9 m	N	N	N	N

N= No requirements

Table 3.2.3: Requirements for Opening Protection Assembly Based on Fire Resistance Rating of Exterior Walls

Fire Resistance Ratings of Exterior Walls (in hours)	Fire Resistance Ratings for Opening Assembly (in hours)
4	Not permitted
3	3.0
2	1.5
1	0.5
N	No requirements

2.4.3 Permitted Types of Construction

2.4.3.1 The types of construction for any occupancy shall conform to the specifications set in Table 3.2.4.

2.4.3.2 Common walls in semi-detached or row type development shall not have any unprotected openings and shall be Type I-A construction and all such wall shall comply with requirements of Party wall or Fire wall or Separation wall.

2.4.3.3 Ground floor or basement of a building used for car parking and utilities within the barriers by at least three hour fire resistive construction shall be considered as non-separated occupancy provided the building accommodates one or more of the following occupancies:

- (i) A3, A5
- (ii) E1, F1, F2
- (iii) I2, I3, I4

2.4.3.4 Entry lobbies, mechanical and electrical rooms and other similar uses incidental to the operation of the building may be provided in the car parking floors provided that the total area of such uses remains within $\frac{1}{3}$ (one third) of the parking floor area.

Table 3.2.4: Permitted Types of Construction and Fire Zones for Various Occupancy Groups

Occupancy	Permitted Types of Construction	Fire Zones
A B C D E1 F1,F2 I K1, K2, M2	Group I and Group II*	1
E2, E3, F3, K3, M1 G H	Group I or Group II*	2
J	Group I	3

*Fire resistance rating of a building shall be credited in case of the mixed type of construction on the basis of lower rated construction elements among the same group or same type used thereof.

2.4.4 General Provision for High-Rise Buildings

For the purpose of this Code, a building of any class of Occupancy will be considered as high-rise when it has floors used for human occupancy located more than 33 m from ground level or the lowest level of fire department vehicle access. The provisions of Sec 2.9.6 shall be applicable to all such buildings.

2.4.4.1 Maintenance and inspection

All fire protection systems shall be maintained and inspected on a regular basis to keep them in operative condition. The maintenance inspection shall be performed quarterly.

All plumbing installations shall be maintained and inspected periodically to keep them in operative conditions.

2.4.4.2 Type of construction

All high-rise buildings shall be of Type I-A or I-B construction.

2.4.4.3 Fire detection, alarm, evacuation and extinguishment system

All high-rise buildings shall conform to regulations set forth in Part 4 of this Code

2.4.5 Helipads**2.4.5.1 General**

Helipads on the roof top of a building or other locations shall be constructed in accordance with this Section.

2.4.5.2 Size

The minimum dimension of the landing area for helicopters weighing less than 1600 kg shall be 6 m × 6 m. There shall be an average clearance of 4 m surrounding and at the level of the landing area which shall not be less than 2 m at any point.

2.4.5.3 Construction

Helicopter landing areas and supports shall be constructed with non-combustible material.

2.4.5.4 Aviation approval

Before helipads start operating, formal approval shall be obtained from the civil aviation authority.

2.4.6 Universal Accessibility

2.4.6.1 All Building (except Occupancies G, H, M and J) shall have universal accessibility as per provisions of this Code.

2.4.6.2 Buildings have universal accessibility shall have accessible egress system.

2.5 Requirements For Occupancy A- Residential Buildings

Buildings shall be classified as Occupancy A in accordance with Sec 2.1.5.

2.5.1 Construction, Height and Allowable Area

2.5.1.1 Buildings or parts thereof classified as Occupancy A shall be limited to the type of construction set forth in Table 3.2.4 and shall not exceed in area or height as specified in Sections 1.8 and 2.4.2 of this Part.

2.5.1.2 Walls and floors separating dwelling units in the same building shall not be less than Type I-D construction.

2.5.1.3 Storage or laundry rooms in Occupancy A2, A3, A4 or A5 that are used in common by the occupants shall be at least Type I-D construction.

2.5.1.4 When a basement or a ground floor of a building of Occupancy A3 or A5 is used for parking or storage of private cars of the occupants, the parking floor shall be of at least Type I-B construction.

2.5.1.5 When the basement or ground floor of a building of Occupancy A is used wholly or partly for generator or electrical substation, the walls and floors surrounding such use shall be of at least Type I-B construction.

2.5.2 Location on Property

Buildings of Occupancy A shall comply with the requirements for location on property and fire resistive exterior walls and openings as specified in this Code.

2.5.3 Access and Exit Facilities and Egress System

2.5.3.1 Facilities for access and exit and egress or escape shall comply with the provisions set forth in this Code.

2.5.3.2 Every sleeping room in ground, first and second floors shall have at least one operable window or door for emergency escape which shall open directly into the exterior or an interior courtyard. The units shall be operable from the inside without the use of any tool to provide a minimum clear opening of 500 mm width by 600 mm height with a maximum sill height of 1 m above the floor.

2.5.4 Lighting and Ventilation

All buildings or part of a building classified as Occupancy A shall conform to the provisions of Part 3, and Chapters 1 and 3 of Part 8.

2.5.5 Sanitation

Sanitation facilities provided in all Occupancy A buildings shall conform to this Part and Chapter 7 Part 8.

2.5.6 Minimum Dimension of Habitable and Non-habitable Rooms

The minimum dimensions of habitable and non-habitable rooms are specified in Sec 1.12.2 Chapter 1 Part 3.

2.5.7 Fire detection, Alarm, Evacuation and Extinguishment

All buildings shall conform to regulations set forth in Part 4 of this Code.

2.5.8 Shaft and Exit Enclosure

Elevator shafts, vent shafts and other vertical openings shall be enclosed conforming to the provisions of Tables 3.3.1 (a) and (b). Exit requirements shall comply with Part 4 of this Code.

2.6 Requirements For Occupancy B - Educational Buildings

Buildings shall be classified as Occupancy B in accordance with Sec 2.1.6.

2.6.1 Construction, Height and Allowable Area

Buildings or parts of buildings classified as Occupancy B shall be limited to type of construction set forth in Table 3.2.4 and comply with the provisions of Sections 1.8 and 2.4.2 of this Part to meet the requirements of height and area limitations.

2.6.1.1 Rooms or groups of rooms sharing a common space where flammable liquids, combustible dust or hazardous materials are used, stored, developed or handled in an amount exceeding that specified in Sec 2.14.3 shall be classified as Occupancy J. Such rooms or groups of rooms shall comply with the requirements of fire protection as specified in Part 4, Chapters 4 and 5.

2.6.1.2 Rooms or groups of rooms, sharing a common space or having separate spaces, served by a common corridor or passage with less than 20 percent outdoor opening of wall in a building of height 11 m or less, or three storeys or less, need not be provided with smoke detectors and standpipe or sprinkler system for fire protection provided it conforms with the access and exit requirements specified in Part 3, Chapter 1, Sec 1.6 and Part 4, Chapters 4 and 5.

2.6.1.3 Buildings of Occupancy B situated outside the jurisdiction of any municipality shall have a construction of at least two hours fire resistance.

2.6.2 Location on Property

Buildings of Occupancy B shall comply with the requirements for location on property and fire resistive exterior walls and openings as specified in Sec 2.4.1.

2.6.3 Access and Exit Facilities and Egress System

Facilities for access and exit and Egress system shall comply with the provisions set forth in Sec 1.6, Chapter 1 Part 3 and Chapter 3 Part 4.

2.6.4 Lighting, Ventilation and Sanitation

Lighting, ventilation and sanitation facilities provided in Occupancy Group B buildings shall conform to Sec 1.16, Chapter 1 Part 3 and Chapters 1 and 3 Part 8.

2.6.5 Minimum Dimensions of Class Rooms, Common Toilets and Staircases

The dimension of a class room shall be not less than 4 m on any side and shall have an area of not less than 0.75m² per student. Other provisions for minimum dimensions shall comply with the requirements set forth in Sec 1.8 of Chapter 1 Part 3.

2.6.6 Shaft and Exit Enclosure

Elevator shafts, vent shafts and other vertical openings shall be enclosed conforming to the provisions of Tables 3.3.1 (a) and (b). Exit requirements shall comply with Chapter 3 Part 4.

2.6.7 Fire Detection, Alarm, Evacuation and Extinguishment System

All buildings shall conform to regulations set forth in Part 4 of this Code.

2.7 Requirements For Occupancy C- Institutional Buildings

Buildings shall be classified as Occupancy C in accordance with Sec 2.1.7.

2.7.1 Construction, Height and Allowable Area

The buildings or parts thereof classified as Occupancy C shall be limited to the type of construction set forth in Table 3.2.4 and shall comply with the provisions of Sec 1.8 Chapter 1 Part 3 and Sec 2.4.2 to meet the requirements of height and area limitations.

2.7.2 Location on Property

Buildings of Occupancy C shall comply with the requirements for location on property and fire resistive exterior walls and openings as specified in Sec 2.4.1.

2.7.3 Access and Exit Facilities and Egress System

Facilities for access and exit and egress system shall comply with the provisions set forth in Sec 1.6, Chapter 1 Part 3 and Chapter 3 Part 4.

2.7.4 Lighting, Ventilation and Sanitation

All buildings or part of a building classified as Occupancy C shall conform to the provisions of Sec 1.16, Chapter 1 Part 3 and Chapters 1 and 3, Part 8.

2.7.5 Shaft and Enclosure

Elevator shafts, vent shafts and other vertical openings shall be enclosed conforming to the provisions of Tables 3.3.1 (a) and (b). Exit requirements shall comply with Chapter 3, Part 4.

2.7.6 Fire Detection, Alarm, Evacuation and Extinguishment System

All buildings shall conform to regulations set forth in Part 4 of this Code.

2.8 Requirements For Occupancy D–Health Care Facilities

Buildings shall be classified as Occupancy D in accordance with Sec 2.1.8.

2.8.1 Construction, Height and Allowable Area

The buildings or parts thereof classified as Occupancy D shall be limited to the type of construction set forth in Table 3.2.4 and shall comply with the provisions of Sec 1.8 Chapter 1 Part 3 and Sec 2.4.2 to meet the requirements of height and area limitations.

2.8.2 Location on Property

Buildings of Occupancy D shall comply with the requirements for location on property and fire resistive exterior walls and openings as specified in Sec 2.4.1.

2.8.3 Access and Exit Facilities and Egress System

Facilities for access and exit and egress system shall comply with the provisions set forth in Sec 1.6 Chapter 1, Part 3 and Chapter 3 of Part 4.

2.8.4 Lighting, Ventilation and Sanitation

All buildings or part of a building classified as Occupancy D shall conform to the provisions of Sec 1.16 Chapter 1 Part 3, Chapters 1 and 3 of Part 8.

2.8.5 Shaft and Enclosure

Elevator shafts, vent shafts and other vertical openings shall be enclosed conforming to the provisions of Tables 3.3.1 (a) and (b). Exit requirements shall comply with Chapter 3 of Part 4.

2.8.6 Fire Detection, Alarm, Evacuation and Extinguishment System

All buildings shall conform to regulations set forth in Part 4 of this Code.

2.9 Requirements For Occupancy E–Business

Buildings shall be classified as Occupancy E in accordance with Sec 2.1.9.

2.9.1 Construction, Height and Allowable Area

The buildings or parts thereof classified as Occupancy E shall be limited to the type of construction set forth in Table 3.2.4 and shall comply with the provisions of Sec 1.8 Chapter 1 Part 3 and Sec 2.4.2 to meet the requirements of height and area limitations.

2.9.2 Location on Property

Buildings of Occupancy E shall comply with the requirements for location on property and fire resistive exterior walls and openings as specified in Sec 2.4.1.

2.9.3 Access and Exit Facilities and Egress System

Facilities for access and exit and egress system shall comply with the provisions set forth in Sec 1.6 Chapter 1 Part 3, Chapter 3 of Part 4.

2.9.4 Lighting, Ventilation and Sanitation

All buildings or part of a building classified as Occupancy E shall conform to the provisions of Sec 1.16 Chapter 1 Part 3, Chapters 1 and 3 of Part 8.

2.9.5 Shaft and Enclosure

Elevator shafts, vent shafts and other vertical openings shall be enclosed conforming to the provisions of Tables 3.3.1 (a) and (b). Exit requirements shall comply with Chapter 3 of Part 4.

2.9.6 Fire Detection, Alarm, Evacuation and Extinguishment System

All buildings shall conform to regulations set forth in Part 4 of this Code.

2.10 Requirements For Occupancy F–Mercantile Buildings

Buildings shall be classified as Occupancy F in accordance with Sec 2.1.10.

2.10.1 Construction, Height and Allowable Area

The buildings or parts thereof classified as Occupancy F shall be limited to the type of construction set forth in Table 3.2.4 and shall comply with the provisions of Sec 1.8, Chapter 1 of Part 3 and Sec 2.4.2 to meet the requirements and limitations of height and area.

2.10.2 Location on Property

Buildings of Occupancy F shall comply with the requirements for location on property and fire resistive exterior walls and openings as specified in Sec 2.4.1.

2.10.3 Access and Exit Facilities and Emergency Escapes

Facilities for access and exit and emergency escape shall comply with the provisions set forth in Sec 1.6 Chapter 1 Part 3 and Chapter 3 Part 4.

2.10.4 Lighting, Ventilation and Sanitation

All buildings or part of a building classified as Occupancy F shall conform to the provisions of Sec 1.16 Chapter 1 Part 3, Chapters 1 and 3, Part 8.

2.10.5 Shaft and Enclosure

Elevator shafts, vent shafts and other vertical openings shall be enclosed conforming to the provisions of Tables 3.3.1 (a) and (b). Exit requirements shall comply with Chapter 3, Part 4.

2.10.6 Fire Detection, Alarm, Evacuation and Extinguishment System

All buildings shall conform to regulations set forth in Part 4 of this Code.

2.10.7 Special Hazards

Installations which are discharging exhaust, heating apparatus, boiler and central heating/air-conditioning plant shall conform to the provisions of this Code as specified in this Code.

2.11 Requirements For Occupancy G—Industrial Buildings

Buildings shall be classified as Occupancy G in accordance with Sec 2.1.11. A non-exhaustive and indicative list of low hazard and moderate hazard industrial uses are listed in A to Z list. Storage and use of hazardous materials shall not exceed the exempt amount specified in Sec 2.14.3.

2.11.1 Construction, Height and Allowable Area

The buildings or parts thereof classified as Occupancy G shall be limited to the type of construction set forth in Table 3.2.4 and shall comply with the provisions of Sec 1.8 of Chapter 1, Part 3 and Sec 2.4.2 to meet the requirements and limitations of height and floor area.

The ceiling height of the production area, shall conform to the minimum volume required per workers as specified by the Bangladesh Labor Act, 2006 and other laws of the land. In any case the ceiling height and the head room clearance of a production floor shall not be less than 3.3 meter and 2.286 meter respectively.

2.11.2 Location on Property

Buildings of Occupancy G shall comply with the requirements for location on property and fire resistive exterior walls and openings as specified in Sec 2.4.1.

2.11.3 Access and Exit Facilities and Egress System

Facilities for access and exit and emergency escape shall comply with the provisions set forth in Sec 1.6 Chapter 1, Part 3 and Chapter 3, Part 4.

2.11.4 Lighting, Ventilation and Sanitation

All buildings or part of a building classified as Occupancy G shall conform to the provisions of Sec 1.16 Chapter 1, Part 3 and Chapters 1 and 3, Part 8. Industrial buildings having roof opening for day lighting and natural ventilation shall comply with the following requirements:

- (a) The aggregate opening in roof and external windows shall not be less than 10 Percent of the floor area.
- (b) For natural ventilation by means of exterior window openings, the operable window area shall not be less than 5 Percent of the total floor area.

Exception:

Industrial buildings wherein artificial lighting and mechanically operated ventilation systems of approved quality are installed, need not be provided with natural ventilation or natural lighting.

2.11.5 Shaft and Enclosure

Elevator shafts, vent shafts and other vertical openings shall be enclosed conforming to the provisions of Tables 3.3.1 (a) and (b). Exit requirements shall comply with Chapter 3, Part 4.

2.11.6 Fire Detection, Alarm, Evacuation and Extinguishment System

All buildings shall conform to regulations set forth in Part 4 of this Code.

2.11.7 Special Hazards

Chimneys, vents and ventilation ducts shall be constructed with noncombustible materials. Every bailer, central heating plants, electrical rooms, or hot water supply boiler shall be separated from the rest of the occupancy or use by not less than two hour fire resistive construction.

2.12 Requirements For Occupancy H—Storage Buildings

Buildings shall be classified as Occupancy H in accordance with Sec 2.1.12.

2.12.1 Construction, Height and Allowable Area

The buildings or parts thereof classified as Occupancy H shall be limited to the type of construction set forth in Table 3.2.4 and shall comply with the provisions of Sec 1.8 of Chapter 1, Part 3 and Sec 2.4.2 to meet the requirements of height and area limitations.

2.12.2 Location on Property

The location on property for Occupancy H shall conform to Sec 2.4.1.

2.12.3 Access and Exit Facilities and Egress System

Facilities for access and exit and egress system shall comply with the provisions set forth in Sec 1.6 of Chapter 1, Part 3 and Chapter 3, Part 4.

2.12.4 Lighting, Ventilation and Sanitation

All buildings or part of a building classified as Occupancy H shall conform to the provisions of Sec 1.16 of Chapter 1 Part 3, Chapters 1 and 3, Part 8.

2.12.4.1 Special provision

The provisions of Sec 1.16, does not apply to non-habitable spaces of H1 and H2 occupancies unless otherwise required by this Code. Ventilators of size not less than 0.25 m² shall be provided where suitable 0.30 m above the floor level for floor level ventilators and 0.30 m below the roof level for roof level ventilators. There shall be one floor level ventilator and one roof level ventilator for every 0.25 m² of the floor area. Mechanized ventilation system of approved quality shall be installed where required.

2.12.4.2 Though inhabitable, the minimum air quality of such indoor spaces shall be maintained in a way that it does not pose any health hazard to the occasional users of that space.

2.12.5 Shaft and Enclosure

Elevator shafts, vent shafts and other vertical openings shall be enclosed conforming to the provisions of Tables 3.3.1 (a) and (b). Exit requirements shall comply with Chapter 3, Part 4.

2.12.6 Fire Detection, Alarm, Evacuation and Extinguishment System

All buildings shall conform to regulations set forth in Part 4 of this Code.

2.12.7 Special Hazards

The storage of hazardous materials shall not exceed the exempt amount as specified in Table 3.2.5. The storage of moderate and low hazardous materials shall be separated at least by a two hour fire resistive construction.

2.13 Requirements For Occupancy I–Assembly Buildings

Buildings shall be classified as Occupancy I in accordance with Sec 2.1.13.

2.13.1 Construction, Height and Allowable Area

The buildings or parts thereof classified as Occupancy I shall be limited to the type of construction set forth in Table 3.2.4 and shall comply with the provisions of Sec 1.8 Chapter 1 Part 3 and Sec 2.4.2 to meet the requirements and limitations of height and area.

2.13.2 Location on Property

Buildings of Occupancy I shall comply with the requirements for location on property and fire resistive exterior walls and openings as specified in Sec 2.4.1.

2.13.3 Access and Exit Facilities and Egress System

Facilities for access and exit and Egress system shall comply with the provisions set forth in Sec 1.6 Chapter 1 of Part 3 and Chapter 3 of Part 4 and universally accessibility as per provisions of this Code.

2.13.4 Lighting, Ventilation and Sanitation

All buildings or part of a building classified as Occupancy I shall conform to the provisions of Sec 1.16 Chapter 1 Part 3, Part 3 and Chapters 1 and 3, Part 8.

2.13.5 Shaft and Enclosure

Elevator shafts, vent shafts and other vertical openings shall be enclosed conforming to the provisions of Tables 3.3.1 (a) and (b). Exit requirements shall comply with Chapter 3, Part 4.

2.13.6 Fire Detection, Alarm, Evacuation and Extinguishment System

All buildings shall conform to regulations set forth in Part 4 of this Code.

The specification of this Section shall apply to all parts of buildings and structures that contain stages or platforms and other similar appurtenances as herein defined.

- (a) Stages: A stage is a three side enclosed or partially enclosed portion of a building which is designed or used for presentation of plays or lectures or other entertainment. A stage shall be further classified as legitimate stage, regular stage and thrust stage.
- (b) Stage, Legitimate: A stage wherein curtains, drops, leg drops, scenery, lighting devices or other stage effects are adjustable horizontally or vertically or suspended overhead.
- (c) Stage, Regular: A stage wherein curtains, fixed drops, valances, scenery and other stage effects are suspended and are not adjustable or retractable.
- (d) Stage, Thrust: A stage or platform extended beyond the proscenium line and into the audience.

2.13.6.1 Legitimate Stage

Legitimate stage shall be constructed as specified in Part 4, specifying the type of construction but shall not be less than construction Type I-C. The position of the legitimate stage extending beyond the proscenium opening line shall be permitted to be constructed with two hour fire-resistive materials. The floor of the stage may be constructed with one hour fire rating materials. Thickness of a wooden floor shall not be less than 50 mm.

2.13.6.2 Regular and Thrust Stages

Regular stages and thrust stages shall be constructed by not less than two hour fire resistive materials. Wooden floor when required in a stage shall not be less than 50 mm in thickness with one hour fire resistive rating.

2.13.6.3 Trap doors

All trap doors and any other opening in stage floors shall be equipped with tight fitting solid wood trap doors with thickness not less than 50 mm.

2.13.6.4 Stage rigging loft

The grid iron frame in the loft, housing lighting and audio equipment, all the machinery for flying scenery and fly galleries, along with their installations, shall be constructed of approved noncombustible materials.

2.13.6.5 Foot lights and stage electrical equipment

Foot lights and border lights shall be installed in a protective cover constructed of noncombustible materials.

2.13.6.6 Trim, finish and decorative hangings

All materials used in moulding and decoration around the proscenium shall be of approved noncombustible materials.

2.13.6.7 Proscenium curtain

The proscenium curtain shall be of approved fire retardant material and shall protect against passage of flame and smoke for at least 30 minutes.

2.13.7 Motion Picture Projection Rooms

2.13.7.1 Every projection room shall be constructed in conformity with the construction requirements for the type of the building in which the projection room is located. The wall opening required for projection need not have a fire protection assembly but shall be closed with glass or other approved materials.

2.13.7.2 The floor area of a projection room shall not be less than 8 m² for a single machine. The working space between the machines when more than one machine is used shall not be less than 0.75 m.

2.13.7.3 The height of the projection room shall have a minimum clear space of 2.5 m.

2.13.8 Sports Facilities

2.13.8.1 Vomitors, aisles and exits of seating galleries

Tunnels, aisles and exits of galleries shall be constructed conforming to the following requirements.

- (a) There shall be a minimum of two exits remotely located from each other immediately to the outside for each balcony or tier. There shall be at least three exits when seating capacity exceeds 1000 persons and four exits when it exceeds 4000 persons. For every additional 1000 persons the exit shall be designed to accommodate provision (f) given below.
- (b) There shall be at least 0.6 m² of space per person in the gallery. Minimum width considered for a seat in the gallery shall be 0.45 m.
- (c) There shall be a maximum of 33 seats on each side of any aisle. Minimum width of the main aisles and the secondary aisles shall be 1.0 m and 0.7 m respectively.
- (d) Entrance and exits shall be protected by safety railings.
- (e) Back to back space between two rows of seats shall not be less than 0.80 m.
- (f) The evacuation time in the galleries shall not be more than 10 minutes.
- (g) All tunnels, aisles and exits shall conform to safety guidelines for means of escape set forth in Part 4.
- (h) One percent of the total seat capacity shall have provisions for accommodation with universal accessibility at the approach or exit level.

2.13.8.2 Swimming pools

Any swimming pool used or constructed for exclusive use by Occupancy A1 and is available only to the occupants and private guests shall be classified as a private swimming pool. Any swimming pool other than private swimming pool shall be classified as a public swimming pool. Swimming pools shall be constructed in conformity with the following requirements.

- (a) There shall be at least 1.5 m space between any sides of a swimming pool and a rear or side property line. For street property lines, this distance shall be at least 2.0 m.

- (b) Swimming pools shall be provided with overflow provision to remove scum and other materials from the surface of the water. When water skimmers are used for private pools there shall be one skimming device for each 50 m² of surface area or fraction thereof.
- (c) The overflow gutters shall not be less than 75 mm deep and shall be pitched to slope of one unit vertical to 50 units horizontal (1:50) toward drains.
- (d) Public swimming pools shall be so designed that the pool water turnover is at least once every 8 hours.
- (e) Private swimming pools shall be designed so that there is a pool water turnover at least once every 18 hours.
- (f) Public swimming pools shall be equipped with filters, the capacity of which shall be controlled to filter 140 liters per minute per m² of surface area. Private swimming pool filters shall not filter more than 230 liters per minute per m² of the surface area.
- (g) The pH value of the pool water shall be between 7.0 and 7.5.
- (h) All recirculation systems shall be equipped with an approved hair and lint strainer installed in the system ahead of the pump.
- (i) All swimming pool and equipment shall be designed to be emptied completely of water and the discharged water shall be disposed in an approved manner and shall not create problems in the neighboring property.
- (j) Pumps, filters and other mechanical and electrical equipment shall be placed in enclosed spaces and shall not be accessible to the bathers.
- (k) Used water from the pool when being discarded shall be reused as grey water for the building and its premises as per provision of Appendix G.

2.13.9 Amusement Building Fire Protection System

The fire protection system shall be as per provisions of this Code.

2.14 Requirements For Occupancy J–Hazardous Buildings

Buildings shall be classified as Occupancy J in accordance with Sec 2.1.14.

2.14.1 General

The plans for buildings and structures accommodating Occupancy J shall clearly indicate the type and intended use of materials and its processing or handling methods so as to reflect the nature of use of each portion of such buildings.

2.14.1.1 Occupancy J1

Any building or portion thereof containing any of the following items more than exempted quantity shall be classified as Occupancy J1.

- (a) Combustible dusts and any similar solid material sufficiently comminuted for suspension in still air which, when so suspended, is capable of self-sustained combustion.
- (b) Combustible liquids - Any liquid having a flash point at or above 40°C shall be known as class II and class III liquids. Combustible liquids shall be classified as follows:
 - (i) Liquids having flash point at or above 40°C and below 60°C.
 - (ii) Liquids having flash points at or above 60°C and below 95°C.
- (c) Cryogenic liquids (flammable or oxidizing): Any liquid that has a boiling point below -130°C.
- (d) Flammable Gases: Any gas when mixed with air in a proportion of 13% (by volume) forms a flammable mixture under atmospheric temperature and pressure.
- (e) Flammable Liquids: Any liquid that has a flash point below 40°C and has a net vapour pressure exceeding 275 kPa at 40°C. Flammable liquids shall be known as Class I liquid and shall be further classified as follows:
 - (i) Liquids having flash point below 25°C and having a boiling point below 40°C.
 - (ii) Liquids having flash point below 25°C and having a boiling point at or above 40°C.
 - (iii) Liquids having flash points at or above 25°C and below 40°C.
- (f) Oxidizers class 3: As determined in accordance with NFPA 43A.
- (g) Oxidizing gases: As determined in accordance with NFPA 43C.
- (h) Pyrophoric liquids, solids and gases that will ignite spontaneously in air at a temperature of 55°C or below.
- (i) Unstable (reactive) materials class 3, non-detonable as determined in accordance with NFPA 704.
- (j) Combustible fibers: Includes readily ignitable fibers like cotton, sisal, jute hemp, tow, cocoa fiber, oakum, baled waste, baled waste paper, kapok, hay, straw, excelsior, Spanish moss and other similar materials.

- (k) Flammable solid: Any solid including blasting agent or explosive that is liable to cause fire through absorption of moisture, spontaneous chemical change or retained heat from manufacturing or processing, or which when ignited burns so vigorously and persistently as to create a serious hazard.
- (l) Organic peroxides, Class II and Class III as determined in accordance with NFPA 43B.
- (m) Oxidizers Class I and Class II as determined in accordance with NFPA 43A.
- (n) The bulk storage of unstable (reactive) materials Class 1 and Class 2 as determined in accordance with NFPA 704, water reactive materials, Class 2 and Class 3 which react with water to release a gas that is either flammable or present a health hazard as determined in accordance with NFPA 704.

2.14.1.2 Occupancy J2

Any building or portion thereof containing the following shall be classified as Occupancy J2:

- (a) Corrosives: Any substance that causes visible destruction of or irreversible alteration in living tissues by chemical action at the site of contact.
- (b) Highly toxic materials: The materials falling in this category are as follows:
 - (i) Oral Toxicity: A chemical that has a median lethal dose of 50 mg or less per kg of body weight when administered orally to albino rats weighing between 200 and 300 gm each.
 - (ii) Toxicity of Inhalation: A chemical that has a median lethal concentration in air of 200 ppm or less by volume of gas or vapors, or 2 mg per liter or less of mist, fume or dust, when administered by continuous inhalation for 1 hour (or less if death occurs within 1 hour) to albino rats weighing between 200 and 300 grams each.
 - (iii) Toxicity by Skin Absorption : A chemical that has median lethal dose of 200 mg or less per kg of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between 2 and 3 kg each.

- (iv) Irritants: Any noncorrosive chemical or substance which causes a reversible inflammatory effect on living tissues by chemical action at the site of contact.
- (v) Radioactive Material: Any material or combination of materials that spontaneously emit ionizing radiation.
- (vi) Sensitizers: A chemical or substance that causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure.
- (c) The Occupancy J2 shall also include among others the followings:
 - (i) Dry cleaning establishments using flammable solvents.
 - (ii) Explosive manufacturing.
 - (iii) Paint or solvent manufacturing (flammable base).
 - (iv) Pyrexin plastic manufacturing.
 - (v) Sodium nitrate or ammonium nitrate.
 - (vi) Storage of combustible film.

2.14.1.3 Occupancy J3

Any building or portion thereof which is used for storage, handling, processing or manufacture of materials and products that use biological processes and in which the risk of harmful biological threat to the occupants exist, shall comply with the guidelines specified by the Department of Health.

2.14.1.4 Occupancy J4

Any building or portion thereof which is used for storage, handling, processing or manufacture of materials and products that use nuclear and radioactive processes and in which the risk of radioactive contamination exists, shall comply with the guidelines specified by Bangladesh Atomic Energy Commission.

2.14.2 Special Provisions

2.14.2.1 The following shall not be included in Occupancy J but shall be classified in the occupancy group which they most nearly resemble and such classification shall be approved by the Authority:

- (a) All buildings and structures and parts thereof which contain less than the exempt quantities as specified in Table 3.2.5, when such buildings comply with the fire protection provisions of this Code.

- (b) Rooms containing flammable liquid in lightly closed containers of 4 litre capacity or less for retail sales or private use on the premises and in quantities not exceeding 820 litres/m² of room area.
- (c) Retail paint sales rooms with quantities not exceeding 820 litres/m² of room area.
- (d) Closed systems housing flammable or combustible liquids or gases used for the operation of machinery or equipment.
- (e) Cleaning establishments.
- (f) Liquor stores and distributors without bulk storage.
- (g) Tire storage containing less than 10,000 vehicle tires.
- (h) The storage or use of materials for agricultural purposes for use on the premises.
- (i) Pyrophoric solids or liquids not exceeding 3 m³ in storage cabinet located in a building that is equipped throughout with an automatic sprinkler system provided in accordance with the fire protection provisions of this Code.
- (j) Pyrophoric solids or liquids not exceeding 3 kg in storage cabinet located in a building that is provided with an automatic sprinkler system installed in accordance with the fire protection provisions in accordance to Part 4 of this Code.
- (k) Class 2 water reactive materials not exceeding 100 kg in an approved storage cabinet located in a building that is provided with automatic sprinkler installed in accordance with the fire protection provisions in accordance to Part 4 of this Code.

2.14.3 Construction, Height and Allowable Area

2.14.3.1 The buildings or parts thereof classified as Occupancy J shall be limited to the type of construction set forth in Table 3.2.4 and shall comply with the provisions of Sec 1.8 of Chapter 1, Part 3 and Sec 2.4.2 of this Chapter to meet the requirements of height and area limitations.

2.14.3.2 Floors: The floors and spaces containing hazardous materials and in areas where motor vehicles, boats, helicopters or airplanes are stored, repaired or operated shall be of noncombustible, liquid-tight construction.

Exception: In floors and areas where no repair works are carried out may be surfaced or waterproofed with asphaltic paving materials.

2.14.3.3 Spill Control: The floors containing hazardous repair or other works shall be recessed a minimum of 100 mm so as to prevent flow of liquids to adjoining areas.

2.14.3.4 Drainage: The buildings and areas shall be provided with approved drainage system to direct the flow of liquids to an approved location or room or area designed to provide secondary containment of the hazardous materials and fire protection water.

Table 3.2.5(a): Exempted Amount of Hazardous Materials in Terms of Physical Hazard in a Control Area

Sl. No.	Material	Class/State	Maximum Quantities in		
			Storage Limit	Use Closed Systems	Use Open Systems
1	Flammable liquids	Class I-A	115 liters *	115 liters *	38 liters
		Class I-B and Class I-C	454 liters *	454 liters *	115 liters
2	Combustible liquids	Class-II	454 liters*	454 liters*	114 liters
		Class-III-A	1249 liters*	1249 liters*	320 liters
		Class-III-B	49962 liters*	49962 liters*	12490 liters
3	Combination of flammable liquids	Class I-A Class I-B Class I-C	454 liters*	454 liters*	113 liters*
4	Flammable gases	Gaseous	28 m ³ at NTP (Natural Temperature and Pressure)	28 m ³ at NTP (Natural Temperature and Pressure)	Not applicable
		Liquefied	113 liters	113 liters	Not applicable
5	Liquefied flammable	Class I-A	113 liters	113 liters	38 liters
		Class I-B and Class I-C	454 liters	454 liters	113 liters
6	Combustible fibres	Loose	2.832 m ³	2.832 m ³	0.57 m ³
		Baled	28.32 m ³	28.32 m ³	5.7 m ³

Sl. No.	Material	Class/State	Maximum Quantities in		
			Storage Limit	Use Closed Systems	Use Open Systems
7	Flammable solids	Pigs, ingots, heavy castings	454 kg	454 kg	454 kg
		Light castings, light metallic products	57 kg	57 kg	57 kg
		Scraps, shavings, powders, dusts	0.454 kg	0.454 kg	0.454 kg
8	Unstable (reactive) detonable	Class 4	0.454kg or 0.28m ³ (NTP)	0.113 kg or 0.057m ³ (NTP)	0.454kg or 0.28m ³ (NTP)
		Class 3	0.454kg or 0.28m ³ (NTP)	0.113 kg or 0.057m ³ (NTP)	0.454kg or 0.28m ³ (NTP)
9	Unstable (reactive) detonable	Class 4	0.454kg or 0.28m ³ (NTP)	0.113 kg or 0.057m ³ (NTP)	0.454kg or 0.28m ³ (NTP)
		Class 3	2.27 kg or 1.42m ³ (NTP)	0.454kg or 0.2832m ³ (NTP)	0.454kg
		Class 2	22.7kg or 70.8 m ³ (NTP)	22.7kg or 70.8m ³ (NTP)	4.54 kg
		Class 1	Not limited or 21.24m ³ (NTP)	Not limited	Not limited
10	Water-reactive detonable	3	0.454 kg	11.25 kg	11.25 kg
		2	0.454 kg	11.25 kg	11.25 kg
11	Water-reactive non-detonable	3	2.27 kg	2.27 kg	0.454 kg
		2	22.7 kg	22.7 kg	4.54 kg
		1	Not limited	Not limited	Not limited
12	Oxidizing Materials	Class 4	0.454 kg	0.1135kg	0.1135kg
		Class 3	4.54 kg	0.227kg	0.227kg
		Class 2	113 kg	113 kg	113 kg
		Class 1	1816 kg	1816 kg	1816 kg

Sl. No.	Material	Class/State	Maximum Quantities in		
			Storage Limit	Use Closed Systems	Use Open Systems
13	Oxidizing Gas	Gaseous	42.48 m ³ (NTP)	42.48 m ³ (NTP)	Not applicable
		Liquefied	56.78 liters	56.78 liters	Not applicable
14	Pyrophoric Material detonable	Not applicable	0.454 kg or 0.056 m ³ (NTP)	0.056 m ³ (NTP)	0
15	Pyrophoric Material non-detonable	Not applicable	1.8 kg. or 1.4 m ³ (NTP)	0.28m ³ (NTP)	0
16	Explosives**	Division 1.1	0.454 kg	0.1135 kg	0.1135 kg
		Division 1.2	0.454 kg	0.1135 kg	0.1135 kg
		Division 1.3	2.27 kg	0.454 kg	0.454 kg
		Division 1.4	22.7 kg	22.7 kg	Not applicable
		Division 1.4G	56.75 kg	Not applicable	Not applicable
		Division 1.5	0.454 kg	0.1135 kg	0.1135 kg
		Division 1.6	0.454 kg	Not applicable	Not applicable

* The maximum quantities may be increased by 100 percent in areas not accessible to the public in buildings provided with automatic sprinkler system.

** see: Explosive control act.

Table 3.2.5(b): Exempted Amounts of Hazardous Materials in Terms Health Hazard in a Control Area

Material	Class/State	Maximum Quantities in		
		Single Storage	Closed Systems	Open Systems
Corrosive	Not applicable	2270 kg or 1892 liters or 23 m ³ NTP	227kg or 1892 liters or 23 m ³ NTP	454kg or 379 liters
Highly toxic	Not applicable	4.54 kg or 0.57 m ³ NTP	4.54 kg or 0.57 m ³ NTP	1.362 kg
Toxic	Not applicable	227 kg or 23 m ³ NTP	227 kg	56.75 kg

Table 3.2.5(c): Location and Number of Control Areas

Grade Level	Floor Level ¹	Number of Control Areas per Floor ²	Fire Resistance Rating of Barriers in Hours		
			Walls	Floors	Floor Supporting Members
Above	Higher than 9	5	1	2	2
	7-9	5	2	2	2
	6	12.5	2	2	2
	5	12.5	2	2	2
	4	12.5	2	2	2
	3	50	2	1	2
	2	75	3	1	2
	1	100	4	1	2
Below	1	75	3	1	2
	2	50	2	1	2
	Lower than 2	Not Allowed	Not Allowed	Not Allowed	Not applicable
The maximum allowable quantity per control area shown in Table 3.2.5					

2.14.3.5 The drains shall be designed with adequate slope and section to carry the design discharge of the sprinkler system. The material used in the drains shall be suitable for drainage of the storage materials.

2.14.3.6 Separate drainage system shall be designed for materials which react with each other producing undesirable results. They may be combined when they have been provided with approved means of discharge into the public sewer or natural stream or river.

2.14.3.7 Containment: The outflow from the drains shall be directed to a containment system or other area that provide a secondary storage for the hazardous materials and liquids and fire protection water. The containment capacity shall be capable of containing the outflow from the drains for a period of at least one hour.

2.14.3.8 The overflow from secondary containment system shall be directed to a safe location away from the building, adjoining properties and storm drain.

2.14.3.9 If the secondary containment storage area is open to rainfall it shall be designed to accommodate 24 hour rainfall or a continuous rainfall of 100 mm per day.

2.14.3.10 Smoke and Heat Vents: Smoke and heat vents shall be provided in areas or rooms containing hazardous materials exceeding the exempt amount of Table 3.2.5.

2.14.3.11 Standby Power: Standby power shall be provided in the occupancies where Class I, II or III organic peroxides are stored.

2.14.4 Location on Property

The location on property for Occupancy J shall conform to Sec 2.4.1 and Part 4.

2.14.5 Access and Exit Facilities and Emergency Escapes

Facilities for access and exit and emergency escape shall comply with the provisions set forth in Sec 1.6 of Chapter 1, Part 3, and Chapter 3, Part 4.

2.14.6 Lighting and Ventilation

2.14.6.1 All spaces and rooms customarily occupied by human beings shall be provided with natural light by means of exterior glazing with an area of not less than 10 Percent of the floor area. Such rooms and spaces shall be provided with natural ventilation by means of exterior openings with an open able area not less than 5 Percent of the total floor area or artificial light and mechanically operated ventilation system as per provisions of this Code.

2.14.6.2 Ventilation in Hazardous Locations: The rooms, spaces or areas where explosive, corrosive, combustible, flammable or highly toxic dust, mists, fumes, vapors or gases are stored or may be emitted due to the processing, use, handling or storage of materials shall be mechanically ventilated.

2.14.6.3 The mechanical ventilation of all hazardous uses shall be segregated or separated from the ventilation of other areas. The emissions generated at work areas shall be confined to the area in which they are generated and shall be removed or discharged outside the building and preventive measures against back flow of such hazardous fumes or gases inside the building shall be installed.

2.14.6.4 Ventilation of Toilets: Toilets shall be provided with fully openable exterior window of at least 0.3 m² in area or a vertical duct not less than 62500 mm² in cross-section for the first water closet, with additional 31250 mm² for each additional fixture or a mechanically operated exhaust system equipped to provide a complete change of air in every 15 minutes. Such system shall be connected to the outside air and the point of discharge shall be at least 1.0 m away from any other opening into the building.

2.14.6.5 Other requirements of water closets are specified in Sec 1.12.4 Chapter 1, Part 3.

2.14.7 Sanitation

All buildings or part of a building classified as Occupancy J shall conform to the provisions of Sec 1.16 of this Chapter and Part 8 of this Code.

2.14.8 Shaft and Exit Enclosures

Elevator shafts, vent shafts and other vertical openings shall be enclosed conforming to the provisions of Tables 3.3.1 (a) and (b). Exit requirements shall comply with Chapter 3, Part 4.

2.14.9 Fire Detection, Alarm, Evacuation and Extinguishment System

All buildings shall conform to regulations set forth in Part 4 of this Code.

2.14.10 Explosion Control

Explosion control, equivalent protective devices or suppression systems or barricades shall be installed to control or vent the gases resulting from deflagrations of dusts, gases or mists in a room or area, building or other enclosures to minimize structural or mechanical damage.

Walls, floors and roofs separating a use from explosion exposure shall be designed according to the provisions of Chapter 1, Part 6.

Explosion venting shall be designed in exterior walls or roof only. The venting shall be provided to prevent serious structural damage and production of lethal projectiles. The venting design shall recognize the natural characteristics and behaviors of building materials in an explosion. The vents shall be designed to relieve at a maximum internal pressure of 1.0 kPa but not less than the loads required by Chapter 2, Part 6. One or more of the following systems shall be installed to relieve explosion, where applicable:

- (a) Lightweight materials in walls
- (b) Light fastening devices with hatch covers
- (c) Light fastening with outward opening swing doors in exterior walls
- (d) Nonbearing walls with light ties

The venting devices shall discharge vertically or horizontally directly to an unoccupied yard having a width of not less than 16 m on the same plot.

The releasing devices shall be so located that the discharge end shall not be less than 3 m vertically and 6 m horizontally from window openings or exits in the same or adjoining buildings.

2.14.11 Special Hazard

Chimneys, vents and ventilation ducts shall be of noncombustible materials.

All boilers, central heating plants, electrical rooms or hot water supply boiler shall be separated from the rest of the occupancies or uses by not less than 2 hour fire resistive construction.

The devices that generate a spark, flame or glow capable of igniting gasoline shall not be installed or used within 0.5 m of the floor.

Equipment or machinery that produces or emits combustible or explosive dust or fibers shall be provided with an approved dust collecting and exhaust system.

The equipment or systems that are used to collect or process or convey combustible dust or fibers shall be installed with explosion venting or containment system.

2.15 Requirements For Occupancy K—Garage Buildings

Buildings shall be classified as Occupancy K in accordance with Sec 2.1.15.

Exception: Non-separated use mentioned in Sec 2.3.1.

2.15.1 Construction, Height and Allowable Area

The buildings or parts thereof classified as Occupancy K shall be limited to the type of construction set forth in Table 3.2.4 and Sec 2.4.4.2 and shall comply with the other provisions of Sec 1.8 Chapter 1 Part 3, Appendix F and Sec 2.4.2 to meet the requirements and limitations of height and area. With the exceptions mentioned in Sec 2.4.3, all garage floors shall be constructed with not less than 4 hour fire resistance materials.

2.15.1.1 Floors: The floors and spaces where motor vehicles are stored, repaired or operated shall be of noncombustible, liquid-tight construction.

Exception: In floors and areas where no repair works are carried out may be surfaced or waterproofed with asphaltic paving materials.

2.15.1.2 Spill Control: The floors containing hazardous repair or other works shall be recessed a minimum of 100 mm so as to prevent flow of liquids to adjoining areas.

2.15.1.3 Drainage: The buildings and areas shall be provided with approved drainage system to direct the flow of liquids to an approved location or room or area designed to provide secondary containment of the hazardous materials and fire protection water.

The drains shall be designed with adequate slope and section to carry the design discharge of the sprinkler system. The material used in the drains shall be suitable for drainage of the storage materials.

The quality of discharged liquids must attain approved level before discharging into the public sewer or natural stream or river.

2.15.1.4 Smoke and Heat Vents: Smoke and heat vents shall be provided in areas or rooms containing hazardous materials exceeding the exempt amount of Table 3.2.5.

2.15.2 Location on Property

Buildings of Occupancy K shall comply with the requirements for location on property and fire resistive exterior walls and openings as specified in Sec 2.4.1.

2.15.3 Access and Exit Facilities and Emergency Escapes

Facilities for access and exit and emergency escape shall comply with the provisions set forth in Sec 1.6 Chapter 1 Part 3, Chapter 3 Part 4 and Appendix F.

2.15.4 Lighting, Ventilation and Sanitation

All buildings or part of a building classified as Occupancy K shall conform to the provisions of Sec 1.16 Chapter 1 Part 3, Chapters 1 and 3, Part 8.

2.15.5 Shaft and Enclosure

Elevator shafts, vent shafts and other vertical openings shall be enclosed conforming to the provisions of Tables 3.3.1 (a) and (b). Exit requirements shall comply with Chapter 3 Part 4.

2.15.6 Fire Detection, Alarm, Evacuation and Extinguishment System

All buildings shall conform to regulations set forth in Part 4 of this Code.

2.16 Requirements For Occupancy L—Utility Buildings

Buildings shall be classified as Occupancy L in accordance with Sec 2.1.16.

2.16.1 Construction, Height and Allowable Area

The buildings or parts thereof classified as Occupancy L shall be limited to the type of construction set forth in Table 3.2.4 and Sec 2.4.3, and shall comply with the provisions of Sec 1.8 Chapter 1 Part 3, and Sec 2.4.2 to meet the requirements and limitations of height and area.

2.16.2 Location on Property

Buildings of Occupancy L shall comply with the requirements for location on property and fire resistive exterior walls and openings as specified in Sec 2.4.1.

2.16.3 Access and Exit Facilities and Egress System

Facilities for access and exit and egress system shall comply with the provisions set forth in Sec 1.6 Chapter 1 Part 3 and Chapter 3 Part 4.

2.16.4 Lighting, Ventilation and Sanitation

All buildings or part of a building classified as Occupancy L shall conform to the provisions of Sec 1.16 Chapter 1 Part 3, Chapters 1 and 3, Part 8.

2.16.5 Shaft and Enclosure

Elevator shafts, vent shafts and other vertical openings shall be enclosed conforming to the provisions of Tables 3.3.1 (a) and (b). Exit requirements shall comply with Chapter 3 Part 4.

2.16.6 Fire Detector, Alarm, Evacuation and Extinguishment System

All buildings shall conform to regulations set forth in Part 4 of this Code.

2.16.7 Special Hazard

2.16.7.1 Since the nature of use of this occupancy involves hazard, special consideration for maintenance and operational safety must be ensured. Depending upon the degree of hazard involved, this occupancy type may have separate and isolated structure.

2.16.7.2 Chimneys and vents and ventilation ducts shall be of noncombustible materials.

All boilers, central heating plants, electrical rooms or hot water supply boiler shall be separated from the rest of the occupancies or uses by not less than 2 hour fire resistive construction.

The devices that generate a spark, flame or glow capable of igniting gasoline shall not be installed or used within 0.5 m of the floor.

Equipment or machinery that produces or emits combustible or explosive dust or fibers shall be provided with an approved dust collecting and exhaust system.

The equipment or system that is used to collect or process or convey combustible dust or fibers shall be installed with explosion venting or containment system.

2.17 Requirements For Occupancy M—Miscellaneous Buildings

Buildings shall be classified as Occupancy M in accordance with Sec 2.1.17.

2.17.1 General

The buildings or parts thereof classified as Occupancy M shall be limited to the type of construction set forth in Table 3.2.4 and shall comply with the requirements of Sections 1.8 and 2.4.2 to meet the requirements of height and area limitations.

Any building or portion thereof that exceeds the limitations provided in this Chapter shall be classified in the occupancy group other than M that it most nearly resembles.

2.17.2 Location on Property

The location on property for Occupancy M shall conform to Sec 2.4.1.

2.17.3 Access and Exit Facilities and Emergency Escapes

Access and exit facilities for Occupancy M shall comply with the specification set in Sec 1.6 Chapter 3, Part 4.

2.17.4 Lighting, Ventilation and Sanitation

All buildings or part of a building classified as Occupancy M shall conform to the provisions of Sec 1.16 Chapters 1 and 3, Part 8.

2.17.5 Shaft and Exit Enclosures

Elevator shafts, vent shafts and other vertical openings shall be enclosed conforming to the provisions of Tables 3.3.1 (a) and (b). Exit requirements shall comply with the requirements of Chapter 3, Part 4.

2.17.6 Fire Detection, Alarm, Evacuation and Extinguishment System

All buildings shall conform to regulations set forth in Part 4 of this Code.

Table 3.2.6: A—Z List of Occupancy Classification

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
A		
Adhesives manufacture	Excluding manufacture of basic components	G or J depending on nature of materials involved
Advertising displays manufacture		G
Agricultural machinery manufacture	Including repairs	G

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Agriculture	Without nuisance or sales limitation	H
Agricultural	Small farm house, (limited to storage quantity)	F
	Large farm house, storage quantity unlimited	H or J
	Small grain processing unit, (limited to quantity)	G
	Large grain processing unit, quantity unlimited	G or J
Aircraft manufacture (including parts)		G or J depending on nature of materials and process involved
Airports		MIXED USE (depending on detail requirement)
Amusement parks, children's	(See children's amusement parks)	-
Amusement park activities		I
Animal	Animal hospitals	F
	Animal pound (for stray and lost animal)	H
	Animal crematorium	G
	Killing establishments, for retail sales	F
	Slaughtering, processing and packing	G
Antique stores		F
Apartments	(see residential)	
	in walkup buildings	A
	In high rises	A
	in housing complex	A
Apartment hotels		A5
Apparel	(See clothing)	

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Appliances	Electrical appliance Manufacturing	G
	Television, radio, phonograph or household appliance stores, (Limited as to floor areas)	F
	Television, radio, phonograph or household appliance stores, (Unlimited)	F
	Household appliance repair shops	F
Arenas, auditoriums, or stadiums	See Assembly (Limited as to capacity)	I
	See Assembly (Unlimited)	I
Art Galleries	Commercial (sales included)	F
	With exhibition open to public viewing for limited period (sales included)	I
Art goods manufacture, religious temple or church, excluding foundry operations		G
Art metal craft shops		F
Art needle work	Six occupants or less	Non-separated use to A1 and A2 Occupancy
	More than six occupants (see industrial)	G
Artist's supply stores		F
Asphalt or asphalt products	Manufacture	J
Assembly	Large assembly with fixed seats	I1
	Small assembly with fixed seats	I2
	Large assembly without fixed seats	I3
	Small assembly without fixed seats	I4
	For sport facilities	I5
Athletic equipment manufacture		G

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Athletic goods stores		F
Auctions rooms, open to public		I
Auditoriums	See assembly	I
Automatic laundries		G
Automobiles	Dead Storage	H
	Driving Schools	E
	Glass or mirror shops	F
	Washing	K
	Manufacture, including parts, or engine rebuilding	J
	Rental establishments	K
	Repairs, body	K
	Repairs, without body repairs	K
	Sales open or enclosed	K
	Seat cover or convertible top establishments, selling or installation	F
	Showrooms, no repair services	K
	Supply stores, no repair services	F
	Tire sales establishments, limited to quantity	F
	Tire sales establishments, unlimited	J
	Wrecking establishments	G
Automotive service stations	Limited as to total area	K
	Unlimited...	K
Awnings	Custom shops	H
	Manufacture, with no limitation on production or on floor area	G

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
B		
Bakeries	Home-made, six or less occupants (baking included)	non-separated use to main occupancy
	Large scale, more than six occupants (baking included)	G
	Sales only	F
Banks,	Including drive-in banks	E
Banquet halls		I
Bar, alcoholic		I
Barber shops		F
Barns		H
Barracks	(See residential)	A4
Baths, steam		I
Beaches, commercial		Not applicable
Beauty parlors		F
Beverages	Bottling works	G
	Manufacture, Alcoholic	J
	Non-alcoholic	G
Bicycle	Manufacture	G
	Rental or repair shops	F
	Sales	F
Billiard parlors		I
Blacksmith shops	small scale (limited to six occupants), repair or making	F
	Unlimited	G
Blueprinting establishments	drawing printing	G
Boarding houses	(See residential)	A
Borstals		C
Boatels		A

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Boats or ships	Bailer works at port or dock	J
	Breaking	J
	Building or repair, for boats less than 200 ft. in length	J
	Building or repair, for boats 200 ft. or more in length	J
	Docks, for small pleasure boats	Not applicable
	Fuel sales, open or enclosed	
	Un- restricted as to location	F
	Restricted as to location	J
	Rentals opened or enclosed	F
	Sales opened or enclosed	F
	Showrooms, with no repair services..	F
	Storage, repair, or painting, including the incidental sales of boats, boat parts, or accessories, with restrictions on boat size and setbacks	G
Bone distillation		G or J depending on process or material used
Botanical garden structures		M
Book	Binding (see printing)	
	Hand binding or tooling	G
	Store	F
Bottling works, for all beverages		G
Bowling alleys	Limited as to number of lanes	I
	Unlimited	I
Breweries		G
Brick manufacture		J
Brush or broom manufacture		G

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Building materials sales	open or enclosed, limited as to lot area	F
	Yards, for sales, storage, or handling, open or enclosed, unlimited as to lot area except in the case of lumber yards	F
Bungalow	(See residential)	A
Business	Offices	B1
	Research and testing laboratories	B2
	Essential services	B3
Bus stations	With less than 10 berths	K (bus area) and I (passenger area)
	With 10 or more berths	MIXED (as per detail requirement including K and I)
Bus stops	see Bus stations	
Business machines	Manufacture	G
	Small, repair shops	F
	Stores, sales, or rentals..	F
Business schools or colleges		B
Buying house (garments)	storage restricted to sample	E
C		
Café	Six persons or less	Non-separated use to main Occupancy
	More than six persons (see mercantile)	F
Cafeteria	With commercial kitchen	MIXED (G and I)
	Without commercial kitchen	I
Camera and photo equipment	Manufacture	G
Camps, overnight or outdoor day		MIXED (A, I and other depending on the nature of use)

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Candy stores		F
Canneries, including food products		J
Canteen	With or without cooking facility	I
Canvas or canvas products manufacture		G2
Cargo terminal	containing low fire-risk materials	H
	containing moderate fire-risk materials	H
	containing high fire-risk materials	J
Carnivals, temporary		I5
Carpentry shops		G
Carpet	Cleaning establishments...	J or G depending on the nature of materials involved
	Manufacture	G
	Carpet, rug, linoleum or other floor covering stores Unlimited	F
Carport	Roofed wall less shelter for car	K or H depending on the nature of use
	Automated mechanical parking	K or H depending on the nature of use
Catering establishments	Commercial kitchen	G
	Office	E
	Storage, open or enclosed	H
	Storage for temporary structure's fabrication material	J
Cattle shed, stables		H
Cement manufacture		G2
Cemeteries		H
Ceramic products	Manufacture	G or J based on nature of material used
	Display and sales	F

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Chamber, doctors' or dentists', (outpatient only)	50 or less occupants	E
	above 50 occupants	D
Charcoal manufacture		G
Chemicals	Compounding or packaging	G or J depending on nature of materials involved
	Manufacture	G or J depending on nature of materials involved
Child care home		C
Child care institution		C
Children's amusement parks	Small	I
	Medium size	I
	Large size	I
	Unlimited as to size	I
Churches, with fixed pews	(See Assembly with fixed seats)	I
Cigar stores		F
Cinema hall	(See Assembly with fixed seats)	I
Cineplex	(See Assembly with fixed seats)	I
Circuses, temporary	(See Assembly)	I
Class room	School, college or university	B
Clay manufacture		G
Clay pits		Not applicable
Cleaning or cleaning and dyeing establishments	(See dry cleaning)....	
Clinics	With inpatient	D
	Only outpatient, limited to quantity (see chambers, doctors' or dentists')	
	Only outpatient, unlimited	D
	With diagnostic facilities (see diagnostic facilities)	
	Government community clinic	E

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Coaching centre	(See educational facilities)	B
Cold storage		H
Composite textile mill		G or J depending on nature of material and process used
Cottage industries	Small, fifty or less workers (see industrial facilities) Large, more than fifty workers... (see industrial facilities)	G1 G1 or G2 depending on the nature of material and process used
Clock	Manufacture Stores or repair shops	G F
Clothing	Accessory stores Custom manufacture or altering for retail Manufacture Rental establishments Store, Limited as to floor area Store, Unlimited	F F G or J depending on nature of the material involved F F F
Clubs Non-commercial (members only)	Including accommodation Night-club All types except those with outdoor swimming pools	MIXED (A and I) I
Clubs, for public use	Excluding accommodation Including accommodation	I MIXED (I and A or other occupancies depending upon nature of use)
Clubs, Sporting		MIXED (I and A or other occupancies depending upon nature of use)

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Coal	Products manufacture	J
	Sales, open or enclosed, Limited as to plot area	J
	Unlimited (see coal storage)	J
	Storage, open or enclosed	J
Coin stores		F
Condensed and powdered milk	Manufacture	J
Coke products	Manufacture	J
Colleges or universities	See educational facilities	B
Colony, government or non-government		MIXED (A and other occupancies depending on use)
Commercial building	(see business and/or mercantile)	
Commercial parking garages or plots	(See garages)	K
Community centers	With commercial kitchen	MIXED (G and I)
	Without commercial kitchen	I
Concrete batching		G
Concrete products manufacture		G
Construction machinery	Manufacture, including repairs	G
Container terminal		H or J (According to the hazard classification regulation of the port authority)
Contractors' establishments	Electrical, glazing, heating, painting, paper hanging, plumbing, roofing, or ventilating	F
	Contractors' yards	Not applicable
Convalescent homes	(See nursing homes)	

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Convents		MIXED (A, B and I)
Cork products	Manufacture	G
Cosmetics or toiletries	Manufacture..	J
Costume rental establishments		F
Cottage, tourist	(See residential)	A5
Cotton ginning or cotton wadding or liner manufacture		J
Court houses		I
Crate manufacture		G or J depending on the material and process involved
Crematoriums	Animals. Human.	J MIXED (J and I)
Cultural center		Mixed (depending on detail requirement)
D		
Dance halls	Public	I
Dance School		A
Dance studios	(see studios)	
Day camps, outdoor		I
Day care Centre	With six or less children	Non-separated use to Residential Occupancy
	More than six children	C
Decorator's establishment	Office	E
	Storage, separated	H or J depending upon the material involved
Defense Buildings, for critical national defense capabilities		Not Applicable
Delicatessen stores	(See food stores)	F

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Dental	Instruments manufacture Laboratories (See laboratories, medical or dental)	G
Department stores	not exceeding 300 m ² more than 300 m ²	F1 F2
Diagnostic facilities, medical	Outpatients only	D
Diaper supply establishments		H
Disinfectants manufacture		G
Dispensaries	Attached to hospital See drug store	L F
Dormitories	Universities or colleges (above 12 grade) Schools (12 grade or below)	A C
Drafting instruments	Manufacture	G
Dressmaking shops, custom		F
Drinking places, non-alcoholic	(See cafe)	
Drive-in theaters		I
Drug stores		F
Dry cleaning or clothes pressing establishments	Limited as to floor area, solvents and machine capacity	G or J depending on the process and quantity of material used
Dry cleaning or cleaning and dyeing establishments	Without restrictions	G or J depending on the process and quantity of material used
Dry Cleaning, using other than flammable liquids in cleaning or dyeing operations		G

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Dry goods stores	Limited as to floor area	F
	Unlimited	F
Dumps		Not applicable
Dyeing facilities/ industries		J
E		
Eating or drinking places	With restrictions on entertainment (see Assembly)	I
	Without restrictions on entertainment or dancing but limited to location in hotels (see Assembly)	I
	Without restrictions (See assembly)	I
Eco park structures		MIXED (depending upon the nature of use)
Educational facilities	Up to higher secondary level	B1
	Training and above-higher-secondary education	B2
	Pre-school facilities	B3
Electric	Power or steam generating plants	G
	Substations, Public transit or railroad	G
	Substations, as part of public distribution system	G
	Substations, low to medium voltage step down, at consumers' end	L
Electrical Appliance	Manufacture	G or J depending upon the process or material to be used
	Stores (including television, radio, phonograph or household appliances)	F
	Contractors (See contractors' establishments)	
	Equipment assembly, not including electrical machinery	G
	Supplies, manufacturing	G

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Electronics manufacturing		J
Electrolysis works		J
Electrotyping or stereotyping	Limited to quantity	F
	Unlimited (see printing)	G
Embassy or High-commission or Consulate		MIXED (depending on detail requirement)
Engine	including rebuilding or reconditioning	J
Engraving or photo-engraving	Limited to quantity	F
	Unlimited (see printing)	G
Excelsior manufacture		J
Exhibition hall	See assembly	I
Exterminators	See pest control	F
F		
Fabric stores		F
Factory		G or J (depending on process and material involved)
Fairs, temporary		MIXED (I and F)
Feathers	Bulk processing, washing, curing, or dyeing	J
	Products manufacture, except washing, curing or dyeing	J
Felt	Bulk processing, washing, curing, or dyeing	G
	Products manufacture, except washing, curing or dyeing	G
Fertilizer manufacture		J
Field hospital, temporary	With provision for ambulance access (to parks and play grounds)	E
Filling stations	(See refueling station)	B

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Film, photographic	Manufacture	G
Fire Stations		E
Fish products, packing or processing		G
Fishing tackle or equipment rental or sales		F
Flats	(see residential) In walkup buildings In high rises in housing complex	A A A MIXED (A and other occupancies)
Florist shops		F
Food	Products processing, except meat slaughtering or preparation of fish for packing Stores, including supermarkets, grocery stores, meat markets, or delicatessen stores	G F
Foundries	Ferrous or non-ferrous	G or J (depending on process and material involved)
Fraternity houses	(See colleges or universities)	
Freight depot	See storage and hazardous buildings	H and/or J
Frozen food lockers		J
Fuel briquettes manufacture		G
Fuel sales, open or enclosed	Limited up to exempted quantity Unlimited, See coal storage or petroleum storage	F J
Funeral establishments		I
Fungicides manufacture		G

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Fur	Goods manufacture, not including tanning or dyeing	G
	Tanning, curing, finishing, or dyeing	J
Furniture	Custom shop, floor area of 100 m ² or less	F
	Custom shop, floor area over 100 m ²	G
	Manufacture	J or G depending upon nature of materials involved
	Store, Limited as to floor area	F
	Store, Unlimited	F
Furriers shops, custom		F
Freight depot		H or J depending on the nature of material involved
G		
Garages	Parking garage	K1
	Private garage	K2
	Repair garage and show-rooms	K3
Garbage incineration or reduction		G
Garden shed		M
Garden supply stores		F
Gardens, truck	(See agriculture)	
Garments industries		G
Gas, fuel	Manufacture	J
	Distribution regulatory system (DRS)	G
Gas manufacture for	Medical purpose	J
	Hot-works (welding)	J
Gasoline service stations	(See refueling stations)	
Gelatin manufacture		G

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Generating plants, electric or steam		G
Gift stores		F
Glass	Cutting shops	F
	Manufacture	G
	Products manufacture from previously manufactured glass	G
Glazing contractor's establishment	(See contractors' establishments)	F
Glue manufacture		G
Godown	See storage buildings	
Golf	Courses	Not applicable
	Courses, miniature	I
	Driving ranges	I
Grain	Milling or processing	J
	Storage	J
Graphite or graphite products	Manufacture	G
Gravel pits		Not applicable
Grocery stores		F
Group homes	Segregation of occupants on the basis of age group and disabilities (See institutional)	C
Gypsum production industry		J
Gymnasiums	Less than 300 occupants	I
	300 or more occupants	I
	Commercial without spectator gallery (max 50 occupants)	

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
H		
Hair	Bulk processing, washing, curing, or dyeing	G
	Products manufacture (except washing, curing, or dyeing)	G
	Products manufacture, custom	G
Hall, for incidental show (picture, drama, theatre)	(See assembly)	I
Hardware	Manufacture	G
	Stores	F
	Bodies manufacture	G
	Repair shops	F
Hazardous buildings	Explosion-hazard building	J1
	Chemical-hazard building	J2
	Biological-hazard building	J3
	Nuclear-hazard building	J4
Health centers	With inpatient	D
	Without inpatient (not more than 50 occupants)	E
	Government operated health centers	E or D (depending upon the facilities)
Healthcare facilities	Normal medical facilities	D1
	Emergency medical facilities	D2
Health club		I
Heating contractor's establishment	(See contractors' establishments)	
Heat, ventilation and air-conditioning equipment showrooms	Without repair facilities	F
Heliports		G
Hemp products manufacture		G

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
High Commission	See embassy	
Home for care	of the old and infirm (see institution) of mentally disabled (see institution)	
Home office	Not more than 6 occupants	Non-separated use of Occupancy A
Hosiery manufacture		G
Hospital, except animal hospital	As part of disaster preparedness program	D
	Casualty unit	D
	Emergency unit	D
	Non-profit or voluntary, and related facilities	D
	Proprietary and related facilities	D
Hostels	For adults	A
	For children	C
Hotels	Transient	A
	Apartment hotel	A
	Starred hotel	MIXED
Household	Appliance repair shops	F
	Appliance stores (See appliances television, radio, phonograph, or household appliance stores)	F
Housing, complex multi-storied		MIXED (see appendix)
Housing, cluster		MIXED (see appendix)
Housing, low-income		MIXED (see appendix)
Housing, minimum standard		MIXED (see appendix)
Housing, rehabilitation		MIXED (see appendix)

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
I		
Ice cream stores		F
Ice	Manufacture, dry or natural	G or J (depending on the process or material used)
	Sales, open or enclosed Limited as to lot area	F
	Unlimited	F
Incineration or reduction of garbage, offal, or dead animals		G
Indoor facility, for amusement park		I
Industrial buildings	Low-hazard Industries	G1
	Moderate-hazard Industries	G2
Infirmaries		C
Ink or inked ribbon manufacture		G or J depending on nature of materials involved
Inns	See residential	A
Insecticides manufacture		G or J depending on nature of materials involved
Institution	For care of children	C1
	Custodial, for physically capable adults	C2
	Custodial, for physically incapable adults	C3
	Penal or mental, for children	C4
	Penal or mental, for adults	C5
Institutions, philanthropic or non-profit	With sleeping accommodations	A
	Without sleeping accommodations	

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Interior decorating establishments	Limited as to floor area for processing, servicing, or repairs	F
	Unlimited, see furniture, textiles or upholstering	F
Irradiation plant		J
J		
Jail	see prisons	
Jewelry	Manufacture	G
	Costume	G
	From precious metals	G
	Shops	F
Junk Yards		Not applicable
Jute products manufacture		G or J (depending on quantity or process)
Juvenile correctional center	For children (see assembly)	
K		
Kennels		H
Kindergarten	See educational facilities	B
Knitwear industries		G2
L		
Laboratories	Medical or dental, for research or testing, with limitations on objectionable effects	E
	Research, experimental, or testing, unlimited	(G or J) and H depending on process or material used in compliance with safety standards
	Radiological laboratory, see radiological facilities	
	Pathological laboratory	G (in compliance with safety standards)

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
	Microbiological laboratory, for diagnostic facility	G or J depending on process or material used in compliance with safety standards
	Microbiological laboratory, for research	G or J depending on process or material used in compliance with safety standards
	Microbiological laboratory, for academic facility	G or J depending on process or material used in compliance with safety standards
Lampblack manufacture		G
Laundries, with no limitations on type of operation		G
Laundry establishments, hand or automatic self-service		G
Lavatory, public	see public toilet	
Leather	Tanning, curing, finishing or dyeing	J
	Goods stores	F
	Products manufacture	G
Libraries	Reading area (see assembly)	I
	Stack area (see storage)	H
	Reading and stack area combined	MIXED (I and H)
Lillah boarding	For children (see institutional)	C
	For adults (see residential)	A
Linen supply establishments		
Linoleum	Manufacture	J
	Stores (See carpet stores)	

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Liquor stores, package		F
Livestock	Storage, more than six castles	H
	Slaughtering or preparation for packing	G
Loan offices		E
Locksmith shops		F
Lodging	See residential	A
Luggage	Manufacture	G
	Stores	F
Lumber	Processing or woodwork, bulk	G
	Sales, Limited as to lot area	G
	Sales, Unlimited	G
	Yard, Limited as to lot area	G
	Yard, Unlimited	G
M		
Machine	Shops including tool, die or pattern making	G
	Tools manufacture	G
Machinery	Manufacture or repair, Heavy	G or J depending on material and process
	Miscellaneous or electrical equipment	G or J depending on material and process
	Rental or sales establishments	F
	Repair shops	F
Machines, business	(See business machines)	
Madrasa	(See institution)	
Manure storage		H
Markets	Retail, including meat (See mercantile)	F
	Wholesale, produce or meat (See mercantile)	F
Masseurs		F

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Matches manufacture		J
Mattress manufacture, rebuilding or renovating		J
Meat	Markets, Retail (See food stores)	F
	Markets, Wholesale	F
	Slaughtering or preparation for packing	G
Medical	Appliances, Custom manufacture	G
	Appliances, Manufacture	G
	Stores	F
	Instruments, manufacture	G
	Laboratories (See laboratories, medical)	
	Offices or group medical centers, Limited as to location within building	E
	Offices or group medical centers, Unlimited	E
Meeting halls	See Assembly	I
Mess houses	(See residential)	
Metal Fabrication industry		J
Metal Assembly industry		J
Metals manufacture	Alloys or foil, miscellaneous	G
	Casting or foundry products, heavy	G
	Finishing, plating, grinding, sharpening, polishing, cleaning, rust proofing, heat treatment, or similar processes	G
	Ores reduction or refining	G
	Products treatment or processing	G
	Reduction, refining, smelting, or alloying	G
	Stamping or extrusion	G
	Treatment or processing	G

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Mental institution	Without detention facilities	D
Mental hospitals	(See institution)	C
Mercantile	Small shops and markets	F1
	Large shops and markets	F2
	Refueling station	F3
Mill	(See industrial and/ or hazardous buildings)	G or J (depending on material or process)
Mill works, and woodworking, wood distillation and particle boards manufacturing		J
Millinery shops		F
Mining machinery manufacture	Including repairs	G
Mirror silvering shops		G
Miscellaneous buildings	Special structures	M1
	Fences, tanks and towers	M2
Monasteries		MIXED
Monument	Sales establishments, with incidental processing to order	F
	Works, with no limitations on processing	G
Mosque	(See assembly)	I
Motels	(See residential)	A
Motion picture production and filming facilities		MIXED (G and other Occupancies as required)
Motorcycles	Manufacture	G
	Repairs, body	G
	Repairs, except body repairs	G
	Sales open or enclosed	F
	Showrooms, with no repair services (See garage)	K
Motor freight stations	See truck terminals	

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Motor vehicles	Dead storage	H
	Moving or storage offices, Limited as to storage	K
	Unlimited	K
Movie theatre	See assembly	I
Museums	See assembly	I
Music stores		F
Music studios	See studios	
Musical instruments	Manufacture, Excluding pianos and organs	G1
	Including pianos and organs...	G2
	Repair shops...	G1
N		
Newspaper publishing		MIXED (G and E)
	Printing	G
	Office	E
Newsstands, open or closed		F
Novelty products manufacture		G
Novitiates...	See institution	A
Nuclear medicine facilities	see radiological facilities	
Nuclear plant		J
Nurseries	See agriculture	
Nursing homes	Philanthropic or non-profit	C or D depending on the type of occupants and nature of use
	Private	C or D depending on the type of occupants and nature of use
Nursery schools	See pre-school	B

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
O		
Oakum products manufacture		G
Office equipment or machinery repair shops		F
Office or business machine stores	sales or rental	F
Offices	General	E
	Business, professional or Governmental (see business occupancy)	E
	Dental, medical, or osteopathic (See medical offices)	E
	Wholesale, with storage restricted to samples (see business occupancy)	E
Offices, small	Architect's/engineer's/ consultant's (Limited to six occupants)	Non-separated use of Occupancy A
	Architect's/engineer's/consultant's (more than six occupants)	E
Oil cloth manufacture		J
Oil sales, open and enclosed	Limited as to lot area	F
	Unlimited (See petroleum or petroleum products storage)	J
Old home	See institution	C
Optical	Equipment manufacture	G
	Goods manufacture	G
Orphanage	See institution	C
Optician or optometrist establishments		F
Orthopedic	Appliances, Custom manufacture	G
	Manufacture	G
	Stores	F
	Instruments, manufacture	G
Osteopathic offices	(See medical offices)	

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
P		
Packing or crating establishments		G2
Packing materials manufacture		G2
Pagoda	See Prayer hall	
Paint	Manufacture Stores, limited to quantity Stores, unlimited	J F H
Painting contractors	(See contractors' establishments)	
Paper	Mills (See wood pulp or fiber) Products manufacture Stock companies	G G H
Paper-hanging contractors	(See contractors' establishments)	
Parish houses		A
Parks, public or private	With provision for emergency vehicle access as part of disaster preparedness program	Not applicable
Park structures		M
Parking garages, public	See garage, parking	K
Parking lots, public	See garage, parking	K
Passenger stations and terminals	Small, passenger station Large, passenger station or terminal Passenger and freight terminal	MIXED (depending on nature of use) MIXED (depending on nature of use) MIXED (depending on nature of use)
Peat storage		H
Perfumed or perfumed soaps	compounding only, not including soap manufacture	J

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Pest control	Exempted quantity only	F
Pet shops		F
Petrol pump	See refueling station	F
Petroleum or petroleum products	Refining	J
	Storage and handling	J
Pharmaceutical products manufacture		G or J depending on nature of materials used
Philanthropic, religious or non-profit activities		MIXED (depending on nature of use)
Phonograph	Repair shops	F
	Stores (See appliances)	F
Photocopying and book binding	Binding limited in quantity	F
Photographic	Developing or printing establishment, Retail	F
	Developing or printing establishment, Wholesale, Limited as to floor area	H
	Developing or printing establishment, Wholesale, Unlimited	H
	Equipment, Manufacture (film)	J
	Equipment, Manufacture (except film)	G
	Stores	F
	Studios	F
	Supply stores (limited to exempted quantity)	F
Photostatting establishments		F
Physical culture establishments		I
Picture framing stores		F
Plants, Industrial		G
Plants, Refrigeration		G

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Plastics	Products, manufacture	J
	Raw, manufacture	J
Plate making	(See printing)	
Playgrounds	With provision for emergency vehicle access as part of disaster preparedness program	I
Plots, parking	(See parking lots, public)	
Plumbing	Contractors' establishments	F
	Equipment manufacturer (See tools or hardware manufacturing)	
	Showrooms, without repair facilities	F
Police Stations		E
Pool halls		I
Porcelain products manufacture		G
Post offices		E
Poultry	Storage (live)	H
	Killing establishments, for retail sales on the same zoning lot only	G
	Packing or slaughtering	G
Power plant		G
Power stations	As part of national grid power distribution system	E
	At consumer's end	L
Prayer hall	See assembly	I
Precision instruments manufacture	Optical equipment, clocks, or similar products	G
	Medical, dental, or drafting instruments, optical goods, or similar products	G
Pre-school facilities	See educational	

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Press club, for journalist		I
Press, printing	See printing	
Primary schools	See educational	
Printing	Custom	G
	Limited as to floor area	G
	Unlimited	G
Printing, publishing, dyeing and printing industries		J
Prisons	See jail	C
Produce or meat markets, wholesale		F
Psychiatric sanatoria	With detention facilities (see institution)	
Public auction rooms		MIXED (F and/or I)
Public transit yards		Not applicable
Publishing	With printing	G
	Without printing	E
Pumping stations	Water or sewage (for city supply system)	G
	Dedicated to consumer	U
Q		
Quarter, Staff	Government or non-government	A or Mixed (See appendix)
R		
Racetracks		I
Radio	Appliance repair shops	F
	Stores	F
	Studios, with less than six occupants	Non-separated use to main Occupancy
	Studios, without transmission tower	E
	Studios, with transmission tower (see radio station)	
	Towers, non-accessory	M

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Radio station		Mixed (depending on the type of use)
Radiological facilities, medical	In compliance with the standard of atomic energy commission	D
Radioactive waste disposal services		J
Railroad	Equipment manufacture, including railroad cars or locomotives Passenger stations Right-of-way Substations Small or medium size Large Railroads, including rights-of-way, freight terminals, yards or appurtenances, or facilities or services used or required in railroad operations, but not including passenger stations	G or J depending on the material and hot-work used I Not applicable G G Not applicable
Rail station		Mixed (depending on the type of use)
Record stores		F
Recreation centers, non-commercial		I
Recreation piers	See assembly	I
Recreational vehicles manufacturing		J
Rectories		A
Reducing salons		I
Reformatories	See institutional facilities	
Refreshments stand, drive-in		I
Refrigerating plants		G

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Refueling station	Petroleum product storage within exempted quantity	E
Refuse incinerators		J
Religious or church art goods manufacture		G
Research establishment	dealing with non-hazard or low hazard materials only	E
Residences	Single-family detached	A
	One-family semi-detached or two-family detached or semi-detached	A
	Boarding or rooming houses	A
	Rest homes (See nursing homes)	
Residential	Single family dwelling	A1
	Two family dwelling	A2
	Flats or apartments	A3
	Mess, boarding house, dormitories and hostels	A4
	Hotels and lodging houses	A5
Rest Houses		
Restaurant	Dining area	I
	Performing area, limited	I
	Kitchen and storage	L
Reviewing stand		I
Riding academies, open or enclosed		E and H
Roofing contractors' establishments		F
Rooming houses	See residential	A
Rubber	Processing or manufacture, natural or synthetic	J
	Products manufacture (excluding all natural or synthetic rubber processing)	J
Rug stores	(See carpet stores)	

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
S		
Sail-making establishments		F
Salvage storage		H
Sand pits		Not applicable
Saloon, hair dressing		F
Sanatoriums	With detention facilities (see institution)	C
	Without detention facilities	D
Sawmills		G
Scenery construction		G
School (see educational)	Dormitories, for children	C
	Nursery, kindergarten, elementary or secondary schools	B
	Trade or other schools for adults, limited as to objectionable effects	B
	Trade schools for adults, unlimited	B
	For physically challenged, without accommodation	B
	For mentally challenged, without accommodation	B
Scrap metal, paper and rag storage		H
Secondary school	See educational	B
Seed stores		F
Seminar halls	For 50 or more occupants, See assembly	I
Seminaries		B
Settlement houses	(see housing)	MIXED (A and other Occupancy depending on the nature of use)
Sewage	Disposal plants	G
	Pumping stations	G

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Sewing machine stores, selling household machines only		F
Ship chandlers, candle shops		F
Ship or boat building or repair yards	For ships 200 ft. in length or over	G
Shipping, waterfront		Not applicable
Shoes	Manufacture Repair shops Stores	G or J depending on the process and material involved F F
Shops	see definition	F or G (depending on the process and material involved)
Shop-house		mixed occupancy (A and F) or (A, F and G)
Sign painting shops	Limited as to floor area Unlimited	G G
Silk processing and spinning		J
Silo, for storage of grain		H
Silver plating shops, custom		G
Silverware manufacture, plate or sterling		G
Sisal products manufacture		J
Skating rinks, roller	Indoor Outdoor	I I
Slag piles		Not applicable

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Slaughtering of animals or poultry		G
Soap or detergents	Manufacture, including fat rendering Packaging only	J G
Soldering shops		G
Solvent extracting		J
Sorority houses	(See hostel)	A
Sports centre		I
Sporting equipment manufacture.		G
Sporting goods stores		F
Stable for horses		H
Stadiums	Indoor or outdoor, with access for emergency vehicle as part of disaster preparedness program	I
Staff quarter	see quarter, staff	
Stamp stores		F
Station	Rail, bus, air and water way	MIXED (I and other Occupancy depending on the nature of use)
Stationary stores		F
Statuary, mannequins, figurines, religious or church art goods manufacture, excluding foundry operations		G
Steel products	Miscellaneous fabrication or assembly (without hot-work) Structural products manufacture	G J
Stock yards or slaughtering of animals or poultry		G

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Stone processing or stone products		G
Storage buildings	Low-fire-risk storage	H1
	Moderate-fire-risk storage	H2
Storage facilities	Wholesale (see storage buildings)	H
	Offices, limited to quantity	Non-separated use
	For cotton/jute/ paper/textile	J
Stores	See definition	F
Students' halls of residence	For children	C
	For adults	A
Studios	Music, dancing, or theatrical	I
	Radio (see radio studio)	
	Television, with spectator	MIXED (I, E or G)
	Television, without spectator	MIXED (depending on nature of material and process involved)
Sugar	Production and Refining	J
Super market	See mercantile	F
Swimming pools	Commercial	I
	Non-Commercial (See clubs)	I
T		
Table tennis halls	See assembly	I
Tailor shops, custom		F
Tanning (See leather or fur)		J
Tapestries manufacture		G
Tar products manufacture		G
Taxidermist shops		F
Telegraph offices		E

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Telephone exchanges or other communications equipment structures		E
Television	Repair shops	F
	Stores (See appliances)	F
	Studios (see television studios)	
	Towers, non-accessory	M
Television station	See business	MIXED (E3 with other Occupancies according to detail requirement)
Temple	See prayer hall	
Tennis courts, indoor		I
Terminal facilities at river crossings for access to electric, gas, or steam lines		G
Test laboratory	involving low hazard material	E
Textiles	Bleaching (see industrial)	G
	Products manufacture (see industrial)	G
	Spinning, weaving, manufacturing, dyeing, printing, knit goods, yarn, thread, or cordage (see industrial)	G
Textile industries and jute mills	including canvas, cotton cloth, bagging burlap, carpet and rags (see industrial)	J
Theater	See assembly	I
Theaters, drive-in	(See studios)	
Theatrical studios	without spectator	G
Tile	Manufacture	G
Tire sales establishments	Including installation services, Limited to quantity	F
	Including installation services, unlimited quantity	J

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Tobacco	Curing or manufacture, or tobacco products manufacture	J
	Stores (retail)	F
Toilet, public		L
Toiletries manufacture		G or J depending on the material and process involved
Tool or hardware manufacture	See industries	G
Topsoil storage	See storage	H
Tourist cabins	See residential	A
Towel supply establishments		F
Toys	Manufacture	G
	Stores	F
Trade or other schools for adults	Limited as to objectionable effects (see educational)	B
	Unlimited (see educational)	B
Trade expositions	Limited as to rated capacity	I
	Unlimited	I
Trailer, truck, bus	Manufacture, including parts	G or J depending on the material and process involved
	Repairs, body	G or J depending on the material and process involved
	Sales open or enclosed	F
	Showrooms, with no repair services	F
Training center	lecture based, limited to quantity (see educational facilities)	E1 or B2
	vocational or demonstrative (see educational facilities)	B2
Transit substations	Small or medium size	G
	Large	G

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Transport terminal	Small or medium size	MIXED depending on nature of use
	Large	MIXED depending on nature of use
Travel agency	(see business)	E
Travel bureaus	(see business)	E
Truck	Manufacture (including parts) or engine rebuilding	G or J depending on the material and process involved
	Repairs, body	G
	Repairs, except body repairs	G
	Sales open or enclosed	F
	Showrooms, with no repair services	F
	Trucking terminals or motor freight stations, Limited as to lot area	K1
	Trucking terminals or motor freight stations, Unlimited	K1
Tutorial homes	More than six occupants (see educational)	B
Turpentine manufacture		J
Typewriter stores		F
Typewriter or other small business machine repair shops		F
Typography	(See printing)	
U		
Umbrellas	Manufacture	G
	Repair shops	F
University	See educational facilities	B2
Upholstery	Manufacturing	J
	Bulk, including shops not dealing directly with consumers	J
	Shops dealing directly with consumers, retail	F
Utility		L

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
V		
Variety stores	Limited as to floor area	F
	Unlimited	F
Varnish manufacture		J
Vehicles	Dead storage of motor	H
	Manufacture, children's	G
	Storage, commercial or public utility, open or enclosed	K
Venetian blind, window shade, or awning	Custom shops, limited as to floor area Manufacture, with no limitation on production or on floor area	F J or G depending upon nature of materials involved
Ventilating contractors	(See contractors' establishments)	F
Ventilating equipment showrooms	Without repair facilities	F
Video games shop		F
Vihara, Buddhist	with occasional or regular assembly	mixed use
W		
Wallpaper stores	Limited to quantity	H
Warehouses		H or J (depending on the nature of material stored)
Watch or clock stores or repair shops		F
Watch making		G
Waterfront shipping		Not applicable
Water pumping stations	At distributor's end	G
	At consumer's end	L
Water tank tower		M
Wax products manufacture		G

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
Weaving, hand	Up to six hand-weaving machines More than six hand-weaving machines	Non- separated use to main Occupancy G
Wedding chapels	See assembly	I
Welding shops	Arc welding only Gas welding within exempted quantity	G G or J depending upon the quantity of material and process
Welfare centers		
Wholesale establishments		H or J depending upon the nature of material
Wholesale offices or showrooms, with storage restricted to samples		E
Window manufacture		G
Window shades	Custom shops, limited as to floor area Manufacture, without limitation on production or on floor area	F G
Wood	Bulk processing or woodworking Distillation Products manufacture Pulp or fibre, reduction or processing, including paper mill operations Sales, open or enclosed, Limited as to lot area Unlimited (See lumber yards) Woodworking shops, custom	G G G G F F J or G depending upon nature of materials involved
Wool scouring or pulling		G
Workshops	With hot-works Without hot-works	J G

Use or Occupancy	Brief Description	Occupancy Class/Sub-class
X		
X-ray facilities	See radiological facilities	
Y		
Yard		Not applicable
Yard, ship	See ship or boat building or repair yards	
Yarn, manufacturing		G or J depending on the quantity (see Table 3.2.5)
Z		
Zoo structures		M

** The occupancy classification for any project, not included in this list, shall be determined through the following process:

- The functional requirements of the unidentified occupancy shall be compared with the Occupancy use type, classification, sub-classification categories and descriptions to match with the given occupancies to find the most similar Occupancy,
- If process (i) fails to determine the Occupancy, the project will be referred to the Board of Appeal constituted as per directives of Part 2 Chapter 2. The Board of Appeal shall determine the Occupancy, and
- The decision of Board of Appeal shall be considered as an explanatory material of this Code and shall be added as addendum to this Code. For any future projects of similar nature this addendum will suffice and need not be referred to the Board of Appeal again.

PART III
Chapter 3

Classification of Building Construction Types Based on Fire Resistance

3.1 General

3.1.1 Classification by Type of Construction

For the purpose of this Code, every room or space of a building or a building itself hereafter altered or erected shall be classified in one specific type of construction as grouped as follows:

GROUP I: Noncombustible, subdivision

Type I-A:	4 hour fire protected
Type I-B:	3 hour fire protected
Type I-C:	2 hour fire protected
Type I-D:	1 hour fire protected
Type I-E:	Unprotected

GROUP II: Combustible subdivision

Type II-A:	Heavy timber
Type II-B:	Protected wood joist
Type II-C:	Unprotected wood joist
Type II-D:	Protected wood frame
Type II-E:	Unprotected wood frame

The fire resistance ratings of various types of construction for structural and non-structural members are specified in Tables 3.3.1 (a) and (b). For hazardous Occupancies involving an exceptionally high degree of fire risk or an exceptionally high concentration of combustible or flammable content, the Authority may increase the requirement of Table 3.3.1 (a).

Buildings having a height of more than 33 m shall be constructed with non-combustible materials.

The fire resistance ratings of various building components shall conform to ASTM standards.