

# DORMITORY BUILDINGS



DORMITORY BUILDINGS						
1.0	GENERAL REQUIREMENTS.	The requirements of this chapter shall apply to buildings or portions thereof used as dormitory occupancies.				
	A building or a space in a building in which group sleeping accommodations are provided for more than 16 persons who are not members of the same family in one room, or a series of closely associated rooms, under joint occupancy and single management, with or without meals, but without individual cooking facilities.					
	College/Student Dormitories	Military/Police Barracks	Other Structure meeting the definition of Dormitory			
1.1	GENERAL CONDITIONS & BUILDING LIMITS					
	Building Category	Building Height (m)	Floor Area (m²)	Basement Levels		
1.1.1	LOW-RISE Dormitory Buildings	< 15.0 m Habitable Height	Permitted with No Limit [in Floor/Fire Area/or Number of Person]	Permitted with No Limit [in Floor/Fire Area, Depth or Levels]		
1.1.2	MID-RISE Dormitory Buildings	≥ 15 m to < 28 m Habitable Height				
1.1.3	HIGH-RISE Dormitory Buildings	≥ 28 m Habitable Height				
FIRE AND LIFE SAFETY REQUIREMENTS						
Item	Fire Safety Provisions	Minimum Requirements		Low-rise	Mid-rise	High-rise
1.2	CLASSIFICATION OF OCCUPANCIES					
1.2.1	MULTIPLE OCCUPANCIES	Dormitories shall be permitted to have their sole means of egress pass through a nonresidential occupancy in the same building, provided that the sole means of egress from the dwelling unit shall not pass through a high hazard contents area.		Required	Required	Required
1.3	OCCUPANT LOAD	Determined on the basis of the occupant load factors (OLF) that are characteristic of the use of the space.				



Item	Fire Safety Provisions	Minimum Requirements	Low-rise	Mid-rise	High-rise
1.3.1	OCCUPANT LOAD FACTOR (OLF)	The occupant load shall be not less than the number of persons determined by dividing the floor area assigned to that use by the occupant load factor of 18.6 m <sup>2</sup> per person.	Required	Required	Required
1.3.2	ACTUAL NUMBER OF OCCUPANTS	If the actual population of a bunk room in Dormitory Buildings, exceeds one person per 18.6 m <sup>2</sup> , the egress capacity features (e.g., door widths) shall be designed based on the actual number of occupants.	Required	Required	Required
1.3.3	NON-RESIDENTIAL OCCUPANCIES in Dormitory Buildings	The occupant load calculations for areas of dormitories used for non-residential purposes shall be based on the occupant load factors (OLF) applicable to the use of the area.	Required	Required	Required
1.4	CLASSIFICATION OF HAZARD OF CONTENTS	The contents of Residential Dormitory Buildings shall be classified as Ordinary Hazard.	Required	Required	Required
1.5	MINIMUM CONSTRUCTION REQUIREMENTS.	Construction shall be in accordance with NFPA 5000 Chapters 7-8, 13-14, 31, and 35- 40.	Required	Required	Required
1.6	ACCESSIBILITY.	Accessibility shall be in accordance with NFPA 5000 Chapter 12.	Required	Required	Required
1.7	(Reserved).				
<b>2.0</b>	<b>MEANS OF EGRESS REQUIREMENTS</b>	<b>Means of egress shall comply with NFPA 101 Chapter 7, and as modified in item 2.0 of this FLS Occupancy Chapter.</b>			
2.1	MEANS OF ESCAPE				
2.1.1	NUMBER OF MEANS OF ESCAPE	In every sleeping room and every living area shall have not less than one primary means of escape and one secondary means of escape.	Required	Required	Required
2.1.1.1	Exemptions	A secondary means of escape shall not be required where the sleeping room or living area has a door leading directly to the outside of the building at or to the finished ground level.	Permitted	Permitted	Permitted



Item	Fire Safety Provisions	Minimum Requirements	Low-rise	Mid-rise	High-rise
2.1.2	PRIMARY MEANS OF ESCAPE	The primary means of escape shall be a door, stairway, or ramp providing a means of unobstructed travel to the outside of the dormitory sleeping room at street or the finished ground level.	Required	Required	Required
2.1.3	SECONDARY MEANS OF ESCAPE	The secondary means of escape, shall be one of the following means:	Required	Required	Required
2.1.3.1		It shall be a door, stairway, passage, or hall providing a way of unobstructed travel to the outside of the dwelling at street or the finished ground level that is independent of and remote from the primary means of escape.	Required	Required	Required
2.1.3.2		It shall be a passage through an adjacent non-lockable space, independent of and remote from the primary means of escape, to any approved means of escape.	Required	Required	Required
2.1.3.3		It shall be an outside window or door operable from the inside without the use of tools, keys, or special effort and shall provide a clear opening of not less than 0.53 m <sup>2</sup> .	Required	Required	Required
2.1.3.4		The width shall be not less than 510 mm, and height not less than 610 mm. The bottom of the opening shall be not more than 1120 mm above the floor.	Required	Required	Required
2.1.4	TWO (2) PRIMARY MEANS OF ESCAPE	Any dormitory sleeping room in excess of 185 m <sup>2</sup> shall be provided with not less than two exit access doors remotely located from each other.	Required	Required	Required
2.1.5	ARRANGEMENT OF MEANS OF ESCAPE within a Dormitory Room	Any required path of travel in a means of escape from any room to the outside shall not pass through another room not under the immediate control of the occupant of the first room or through a bathroom or other space subject to locking.	Required	Required	Required
2.1.6	DOORS (Width) within a Dormitory Room	Doors in the path of travel of a means of escape, other than bathroom doors and doors serving a room not exceeding 6.5 m <sup>2</sup> shall be not less than 710 mm wide.	Required	Required	Required



Item	Fire Safety Provisions	Minimum Requirements	Low-rise	Mid-rise	High-rise
2.1.6.1	Bathroom Doors (Width)	Bathroom doors and doors serving a room not exceeding 6.5 m <sup>2</sup> shall be not less than 610 mm wide.	Required	Required	Required
2.1.6.2	Doors (Height)	Doors (within guest rooms, guest suites) nominal height shall be not less than 1980 mm.	Required	Required	Required
2.1.7	HALLWAYS (Width)	Hallways within a guest room or guest suite shall be not less than 915 mm	Required	Required	Required
2.1.7.1	Hallways (Height) within a Dormitory Sleeping Room	Nominal height of hallways with clearance below projections from the ceiling of not less than 2030 mm shall be not less than 2135 mm.	Required	Required	Required
2.2	MEANS OF EGRESS COMPONENTS	Means of egress components shall be limited to the types described in 2.2.	Required	Required	Required
2.2.1	GENERAL	Exit enclosures shall have a minimum 1-hour fire resistance rating, and doors shall have a minimum 1-hour fire protection rating.	Required	Required	Not permitted
2.2.2	DOORS	Doors shall be in accordance with NFPA 101 section 7.2.1, and the requirements in 2.2.2.1 and 2.2.2.2.	Required	Required	Required
2.2.2.1	Installed Security Measures	No door in any means of egress shall be locked against egress when the building is occupied.	Required	Required	Required
		Locks, if provided, must not require the use of a key, a tool, or special knowledge or effort for operation from the egress side of the building.	Required	Required	Required
2.2.2.2	Revolving Doors	Revolving door assemblies, whether used or not used in the means of egress, complying with NFPA 101 section 7.2.1.10.	Permitted	Permitted	Permitted
2.2.3	STAIRS	Stairs complying with NFPA 101 section 7.2.2.	Required	Required	Required
2.2.3.1	Spiral Stairs	Spiral stairs used as a component in the means of egress.	NP	NP	NP
2.2.3.2	Winders	Windings in stairs used as a component in the means of egress.	NP	NP	NP



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2.2.4	SMOKE PROOF ENCLOSURES	Smokeproof enclosures complying with NFPA 101 section 7.2.3.	Permitted	Permitted	Permitted
2.2.5	HORIZONTAL EXITS	Horizontal exits complying with NFPA 101 section 7.2.4.	Permitted	Permitted	Permitted
2.2.6	RAMPS	Accessible ramps and ramps used as a component in the means of egress shall conform with the general requirements for ramps in NFPA 101 7.2.5.	Required	Required	Required
2.2.7	EXIT PASSAGEWAY	Exit passageways complying with NFPA 101 section 7.2.6	Permitted	Permitted	Permitted
2.2.8	AREA OF REFUGE	Areas of refuge complying with NFPA 101 section 7.2.12.	Required	Required	Required
2.3	CAPACITY OF MEANS OF EGRESS	The capacity of means of egress shall be in accordance with NFPA 101 section 7.3 and as modified in 2.3.2.	Required	Required	Required
2.3.1	STREET FLOOR EXIT	Street floor exits shall be sufficient for the occupant load of the street floor plus the required capacity of stairs discharging onto the street floor.	Required	Required	Required
2.3.2	CORRIDORS	Corridors, other than those within sleeping rooms, shall be of sufficient width to accommodate the required occupant load and shall be not less than 1200 mm.	Required	Required	Required
2.4	NUMBER OF MEANS OF EGRESS	The number of means of egress shall be in accordance with NFPA 101 section 7.4 and as permitted in 2.4.3.	Required	Required	Required
2.4.1	NOT LESS THAN TWO (2)	Not less than two (2) separate exits shall be provided on every story.	Required	Required	Required
2.4.2		Not less than two separate exits shall be accessible from every part of every story.	Required	Required	Required
2.4.2.1		Exit access, shall be permitted to include a single exit access path for the distances permitted as common paths of travel by 2.5.2.	Permitted	Permitted	Permitted
2.4.3	SINGLE EXIT PROVISIONS	A single exit shall be permitted to serve all floor levels, provided that all of the conditions for a single exit provisions are met.	Permitted	NP-Not Permitted	NP



Item	Fire Safety Provisions	Minimum Requirements	Low-rise	Mid-rise	High-rise
2.4.3.1	Floor Area	Gross floor area (GFA) is equal or less than 500 m <sup>2</sup> per floor level	Required	-	-
2.4.3.2	Common Path	Common path of travel distance from the entrance door of any dormitory room to an exit does not exceed 15 m.	Required	-	-
2.4.3.3	Enclosures of Exit Stairway	Exit stairway is completely enclosed or separated from the rest of the building by a minimum 2-hour fire resistance rating (1.5-hrs doors) where the exit connects four or more stories.	Required	-	-
2.4.3.4	Number, Depth and Floor Area of Basement	Stairway serve only one (1) basement, that is equal or less than 500 m <sup>2</sup> fire area or fire compartment and only has 6.0m maximum depth.	Required	-	-
2.4.3.5	Opening Protective	All openings between the exit enclosure and the building are protected with self-closing door assemblies of 1-hour fire protection rating.	Required	-	-
2.4.3.6	Exit Access Corridors	All corridors serving as access to exits have a minimum of 1-hour fire resistance rating.	Required	-	-
2.4.3.7	Exit Discharge	Exits shall terminate directly, at a public way or an interior exit discharge.	Required	-	-
2.4.3.7(1)		The interior exit discharge, shall be within 11 m. from the exit enclosure door to an exterior door leading to the public way.	Required	-	-
2.4.3.7(2)		The interior exit discharge shall be separated from the remainder of the level of discharge by fire barriers with a minimum 1-hour FR rating.	Required	-	-
2.4.3.8	Subdivisions of Building Spaces	Horizontal and vertical separation of 1.0-hr fire resistance rating is provided between dormitory room.	Required	-	-
2.4.3.9	Smoke Vents	Provisions of fixed or permanent wall openings, automatic opening vents (AOV) at the top of the staircase.	Required	-	-
2.5	ARRANGEMENT OF MEANS OF EGRESS	Access to all required exits shall be in accordance with NFPA 101 section 7.5, as modified by 2.5.1 through 2.5.4.	Required	Required	Required



Item	Fire Safety Provisions	Minimum Requirements	Low-rise	Mid-rise	High-rise
2.5.1	TRAVEL DISTANCE (TD) TO EXITS	Travel distance within a dormitory room to a corridor door shall not exceed 38 m.	Required	Required	Required
2.5.1.1	TD from Room Door to an Exit	Travel distance from the corridor door of any dormitory room to the nearest exit s shall not exceed 61m.	Required	Required	Required
2.5.1.2		Travel distance from the corridor door of any dormitory room to the nearest exit, shall not exceed 61 m for exterior ways of exit access.	Required	Required	Required
2.5.2	COMMON PATH OF TRAVEL	Travel within a dwelling unit shall not be included when calculating common path of travel.	Permitted	Permitted	Permitted
2.5.2.1	Common Path Limit	Common path of travel shall not exceed 15 m.	Required	Required	Required
2.5.3	DEAD-END CORRIDOR	Dead-end corridors shall not exceed 15 m.	Required	Required	Required
2.5.4	EXIT ACCESS DOORS	Any guest room or any guest suite in excess of 185 m <sup>2</sup> shall be provided with not less than two exit access doors remotely located from each other.	Required	Required	Required
2.6	DISCHARGE FROM EXITS	Discharge from exits shall be in accordance with NFPA 101 7.7 and in 2.6.1 through 2.6.3.	Required	Required	Required
2.6.1	EXIT TERMINATION	Exits shall terminate directly, at a public way or an exterior exit discharge.	Required	Required	Required
2.6.2	EXIT DISCHARGE THRU INTERIOR BUILDING AREAS	Discharge thru interior building areas with not more than 50 percent of the required number of exits, and 50 percent of the required egress capacity.	Permitted	Permitted	Permitted
2.6.3		Interior exit discharge as permitted in 2.6.2 shall be within a max. 11 m. travel distance to exit termination or the building external.	Permitted	Permitted	Permitted
2.7	ILLUMINATION OF MEANS OF EGRESS	Means of egress shall be illuminated in accordance with NFPA 101 section 7.8.	Required	Required	Required
2.8	EMERGENCY LIGHTING	Emergency lighting in accordance with NFPA 101 Section 7.9, and in additional locations in 2.8.1.	Required	Required	Required
2.8.1	ADDITIONAL LOCATIONS	In common areas and corridors within any multiple sleeping rooms> within a dormitory room.	Required	Required	Required





Item	Fire Safety Provisions	Minimum Requirements	Low-rise	Mid-rise	High-rise
2.8.2	Exemptions	The requirement for emergency lighting shall not apply where each guest room or guest suite or dormitory room has an exit direct to the outside of the building at street or the finished ground level.	Permitted	Permitted	Permitted
2.9	MARKINGS OF MEANS OF EGRESS	Means of egress shall have signs in accordance with NFPA 101 section 7.10.	Required	Required	Required
2.10	NORMALLY UNOCCUPIED BUILDING SERVICE EQUIPMENT SUPPORT AREAS	Provisions for normally unoccupied service support areas in accordance with NFPA 101 section 7.14.	Not permitted	Not permitted	Not permitted
2.11	(Reserved).				
<b>3.0</b>	<b>PROTECTION.</b>	<b>Protection shall comply with the applicable NFPA codes and standards, QCD FLS Annex and as modified in item 3.0 of this FLS Occupancy Chapter.</b>			
3.1	PROTECTION OF VERTICAL OPENINGS	Vertical openings shall be enclosed or protected in accordance with NFPA 101 section 8.6.	Required	Required	Required
3.1.1	CONVENIENCE OPENINGS	Convenience openings in accordance with NFPA 101 section 8.6.9.1.	Permitted	Permitted	Permitted
3.1.2	WALLS Enclosing Vertical Openings	Walls enclosing vertical openings shall have a min. 1-hour fire resistance rating, and the doors shall have a min. 1-hour fire protection rating.	Required	Required	Required
3.1.3	FLOOR Below the Level of Exit Discharge	No floor below the level of exit discharge used only for storage, heating equipment, or purposes other than residential occupancy shall have unprotected openings to floors used for residential purposes.	Required	Required	Required
3.2	PROTECTION FROM HAZARDS				
3.2.1	GENERAL	All rooms containing high-pressure boilers, refrigerating machinery, transformers, or other service equipment subject to possible explosion shall not be located directly under or directly adjacent to exits and shall be effectively cut off from other parts of the building as specified in NFPA 101 section 8.7.	Required	Required	Required



Item	Fire Safety Provisions	Minimum Requirements	Low-rise	Mid-rise	High-rise
3.2.2	HAZARDOUS AREAS	Any hazardous area shall be protected in accordance with NFPA 101 section 8.7 and as specified in 3.2.2.1 through 3.3.2.9.	Required	Required	Required
3.2.2.1	Boiler and fuel-fired heater rooms	1 hour and AFS-Automatic Sprinkler System	Required	Required	Required
3.2.2.2	Employee locker rooms	AFS-Automatic Sprinkler System	Required	Required	Required
3.2.2.3	Gift or retail shops	AFS-Automatic Sprinkler System	Required	Required	Required
3.2.2.4	Bulk laundries	1 hour and AFS-Automatic Sprinkler System	Required	Required	Required
3.2.2.5	Guest Laundries $\leq 9.3 \text{ m}^2$ outside of rooms/suites	AFS-Automatic Sprinkler System	Required	Required	Required
3.2.2.6	Guest Laundries $> 9.3 \text{ m}^2$ outside of rooms/suites	1 hour and AFS-Automatic Sprinkler System	Required	Required	Required
3.2.2.7	Maintenance shops	1 hour and AFS-Automatic Sprinkler System	Required	Required	Required
3.2.2.8	Storage Rooms	1 hour and AFS-Automatic Sprinkler System	Required	Required	Required
3.2.2.8.2		Where storage areas not exceeding $2.2 \text{ m}^2$ are directly accessible from the guest room or guest suite, no separation is required.	NR	NR	NR
3.2.2.9	Trash collection rooms	1 hour and AFS-Automatic Sprinkler System. Also see 5.1.	Required	Required	Required
3.3	INTERIOR FINISH	Interior finish shall be in accordance with NFPA 101 Section 10.2.	Required	Required	Required
3.3.1	INTERIOR WALL AND CEILING FINISH	Interior wall and ceiling finish materials shall be permitted as follows:	Required	Required	Required
3.3.1.1		Exit enclosures – Class A	Required	Required	Required
3.3.1.2		Lobbies and corridors – Class A or Class B	Required	Required	Required
3.3.1.3		Other spaces – Class A, Class B, or Class C	Required	Required	Required
3.3.2	INTERIOR FLOOR FINISH	Interior floor finish in exit enclosures and exit access corridors and spaces not separated by walls complying with 3.6 shall be not less than Class II.	Required	Required	Required
3.4	DETECTION, ALARM & COMMUNICATION REQUIREMENTS				



Item	Fire Safety Provisions	Minimum Requirements	Low-rise	Mid-rise	High-rise
3.4.1	GENERAL	Complete coverage of a Fire Detection and Alarm System.	Required	Required	Required
3.4.2	INITIATION	Complete coverage of an Automatic Detection and Manual Initiating Devices.	Required	Required	Required
3.4.3	OCCUPANT NOTIFICATION	Complete Coverage of an Occupant Notification (audible & visible).	Required	Required	Required
3.4.3.1	Emergency Voice Evacuation System	Mass Notification System	NR	Required	Required
3.4.4	SUPPLEMENTARY				
3.4.4.1	Fire Telephone	In every required provisions of a fire command center (FCC) or emergency control center (ECC).	NR	Required	Required
3.4.4.2	Graphic Annunciator (PC Panel) or Mimic Panel	In every required provisions of a fire command center (FCC) or emergency control center (ECC).	NR	Required	Required
3.5	EXTINGUISHMENT REQUIREMENTS		Required	Required	Required
3.5.1	AUTOMATIC SPRINKLER SYSTEM	Dormitory buildings shall be protected throughout by an approved, supervised automatic sprinkler system.	Required	Required	Required
3.5.2	DRAFT STOPS and CLOSELY SPACED SPRINKLERS in Vertical Openings	The provisions for draft stops and closely spaced sprinklers shall not be required for openings complying with 3.1.1 where the opening is within the guest room or guest suite.	NR- Not required	NR	NR
3.5.4	OPEN PARKING STRUCTURES	Open parking structures complying with the openings requirement for an open parking structure and are contiguous with or adjacent to hotels shall be exempt from the sprinkler requirements.	NR	NR	NR
3.5.5	Fire Hose Reel	Fire hose reels are required in buildings protected by an approved supervised automatic sprinkler system.	Required	Required	Required
3.5.6	Portable Fire Extinguisher	Applicable Portable Fire Extinguishers required in all buildings.	Required	Required	Required
3.5.7	Rising Main (Dry or Wet Standpipe)	Refer to Annex Fire Fighting System Annex_FFS_G1 Revisions 2021	Required	Required	Required



Item	Fire Safety Provisions	Minimum Requirements	Low-rise	Mid-rise	High-rise
3.6	SMOKE CONTROL / VENTILATION REQUIREMENTS	Legend: NR-Not Required; NA-Not Applicable; NP-Not Permitted			
3.6.1	STAIRWELL/LOBBY	Design conditions per Annex ACMV_N1 Revisions 2021.			
3.6.1.1	Less than 9 m habitable height		No Reqmt	No Reqmt	No Reqmt
3.6.1.2	9 m to 15 m habitable height	Vent at top of stairwell	Required	NA	NA
		Stair ventilation openings at every floor level (stairs along external walls)	Permitted	NA	NA
		Stairwell Pressurization	NR	NA	NA
3.6.1.3	>15 m to < 28 m habitable height	Vent at top of stairwell	NA	NP	NA
		Stair ventilation openings at every floor level (stairs along external walls)	NA	Required	NA
		Stairwell Pressurization	NA	Permitted	NA
3.6.1.4	≥28 m habitable height	Vent at top of stairwell	NA	NA	NP
		Stair ventilation openings at every floor level (stairs along external walls)	NA	NA	NP
		Stairwell pressurization, smoke stop/fire fighting lobby pressurization	NA	NA	Required
	Connecting Basement Levels				
3.6.1.5	Two basement levels or ≤6 m deep, ≤2000 m <sup>2</sup> floor area	Vent at top of stairwell : * Permitted up to five (5) connecting above floors (2B+G+4 or less) or 12 m habitable height ; whichever is less; otherwise next below provisions shall apply.	*Required	NP	NP
		Stair ventilation openings at every floor level (stairs along external walls)	Permitted	Required	NP
		Stairwell pressurization, smoke stop/fire fighting lobby pressurization	Permitted	Permitted	Required



Item	Fire Safety Provisions	Minimum Requirements	Low-rise	Mid-rise	High-rise
3.6.1.6	Three basement levels or $\leq 9.1$ m deep, $\leq 2000$ m <sup>2</sup> floor area	Vent at top of stairwell : * Permitted up to three (3) connecting above floors only (3B+G+2 or less) or 6m habitable height, whichever is less; otherwise next below provisions shall apply	*Required	NP	NP
		Stair ventilation openings at every floor level (stairs along external walls)	NA	NA	NA
		Stairwell pressurization, smoke stop/fire fighting lobby pressurization	Permitted	Permitted	Permitted
3.6.1.7	Two basement levels or $\leq 6$ m deep, $>2000$ m <sup>2</sup> floor area	Vent at top of stairwell: * Permitted up to four (4) connecting floors (2B+G+3 or less) or 9 m habitable height ; whichever is less; otherwise next below provisions shall apply.	*Required	NP	NP
		Stair ventilation openings at every floor level (stairs along external walls)	Required	NP	NP
		Stairwell pressurization, smoke stop/fire fighting lobby pressurization	Permitted	Required	Required
3.6.1.8	Three basement levels or $\leq 9.1$ m deep, $>2000$ m <sup>2</sup> floor area, connecting one floor above only	Vent at top of stairwell : * Permitted up to two connecting above floors or 3 m habitable height only (3B+G+1 or less); whichever is less, otherwise next below provisions shall apply	*Required	NP	NP
		Stair ventilation openings at every floor level (stairs along external walls)	NA	NA	NA
		Stairwell pressurization, smoke stop/fire fighting lobby pressurization.	Permitted	Required	Required
3.6.1.9	Lowest basement level $>9.1$ m below ground level, regardless of floor area	Vent at top of stairwell	NP	NP	NP
		Stair ventilation openings at every floor level (stairs along external walls)	NP	NP	NP
		Stairwell pressurization, smoke stop/fire fighting lobby pressurization	Required	Required	Required
3.6.2	ESCAPE CORRIDOR PROTECTION	Design conditions per Annex ACMV_N1 Revisions 2021.			



Item	Fire Safety Provisions	Minimum Requirements	Low-rise	Mid-rise	High-rise
3.6.2.1	Interior Corridors	Vents (Fixed or Automatic Opening)	Required in specific type of Occupancy: Healthcare & Detention Occupancies		
		Mechanical Ventilation of Corridor			
		Pressurization of Corridor			
3.6.2.2	Corridor with side/s located along exterior walls	Vents (Fixed or Automatic Opening)	Required in specific type of Occupancy: Healthcare & Detention Occupancies		
		Mechanical Ventilation of Corridor			
		Pressurization of Corridor			
3.6.3	ATRIUM and OTHER FLOOR OPENINGS	Design conditions per Annex ACMV_N1 Revisions 2021.			
3.6.3.1	Malls (with floor openings connecting >2 floors)	Smoke Vents (Fixed or Automatic Opening)	Required	NP	NP
		Mechanical Smoke Exhaust Ventilation System/Engineered	Permitted	Required	Required
3.6.3.2	Other Occupancies (connecting >3 floor levels)	Smoke Vents (Fixed or Automatic Opening)	Required	Permitted	NP
		Mechanical Smoke Exhaust Ventilation System/Engineered	Permitted	Permitted	Required
3.6.4	CAR PARKS/PARKING STRUCTURES	Design conditions per Annex ACMV_N1 Revisions 2021.			
3.6.4.1	Open Parking Structures	The open parking structure shall justify that no smoke stagnation will occur such as from a fire located somewhere in the middle of the car park; otherwise mechanical equipment that will aid in effective dispersal of smoke shall be provided	Required	Required	Required
3.6.4.2	Aboveground Enclosed Car Parks				
3.6.4.2.1	Aggregate floor area of $\leq 2000 \text{ m}^2$	Smoke Vents (Fixed or Automatic)	Required	Required	Permitted
		Mechanical Smoke Purging/Clearance	Permitted	Permitted	Required
		Engineered Smoke Control System	Permitted	Permitted	Permitted
3.6.4.2.2	Aggregate floor area of $> 2000 \text{ m}^2$	Smoke Vents (Fixed or Automatic)	Required	NP	NP
		Mechanical Smoke Purging/Clearance	Permitted	Required	NP
		Engineered Smoke Control System	Required	Permitted	Required



Item	Fire Safety Provisions	Minimum Requirements	Low-rise	Mid-rise	High-rise
3.6.4.3	Belowground Car Parks		≤6m Deep	>6m - ≤9.1 m Deep	>9.1 m Deep
3.6.4.3.1	Aggregate floor area of ≤2000 m <sup>2</sup>	Smoke Vents (Fixed or Automatic)	Required	NP	NP
		Mechanical Smoke Purging/Clearance	Permitted	Required	Required
		Engineered Smoke Control System	Permitted	Permitted	Permitted
3.6.4.3.2	Aggregate floor area of >2000 m <sup>2</sup>	Smoke Vents (Fixed or Automatic)	NP	NP	NP
		Mechanical Smoke Purging/Clearance	Required	NP	NP
		Engineered Smoke Control System	Permitted	Required	Required
3.7	CORRIDORS	Exit access corridor shall be protected in accordance with 3.7.1 thru 3.7.4	Required	Required	Required
3.7.1	WALLS	Corridor walls shall have a minimum 1/2-hour fire resistance rating.	Required	Required	Required
3.7.2	DOORS	Doors that open onto exit access corridors shall have not less than 30-minute fire protection rating	Required	Required	Required
3.7.2.1	Self-closing/Self-Latching Devices	Doors that open onto exit access corridors shall be self-closing and self-latching.	Required	Required	Required
3.7.3	UNPROTECTED OPENINGS	Unprotected openings, other than those from spaces complying with 3.7.3.1, shall be prohibited in exit access corridor walls and doors.	Not permitted	Not permitted	Not permitted
3.7.3.1	Exemption	Spaces shall be permitted to be unlimited in area and open to the corridor, provided that all of the following criteria are met:	Permitted	Permitted	Permitted
3.7.3.1(1)		The space is not used for guest rooms or guest suites or hazardous areas.	Required	Required	Required
3.7.3.1(2)		The space does not obstruct access to required exits.	Required	Required	Required
3.7.4	TRANSOM, LOUVERS, OR TRANSFER GRILLES	Transoms, louvers, or transfer grilles shall be prohibited in walls or doors of exit access corridors.	Not permitted	Not permitted	Not permitted
3.8	SUBDIVISION OF BUILDING SPACES	Buildings shall be subdivided in accordance with 3.8.1.			



Item	Fire Safety Provisions	Minimum Requirements	Low-rise	Mid-rise	High-rise
3.8.1	SEPARATION BETWEEN ROOMS	Each dormitory room/sleeping room shall be separated from other guest rooms by walls and floors constructed as fire barriers having a minimum 1/2-hour fire resistance rating.	Required	Required	Required
3.8.2	DOORS	Doors in the barriers required by 3.8.1 shall have a fire protection rating of not less than 30 minutes and shall not be required to be self-closing.	Required	Required	Required
3.9	(Reserved).				
<b>4.0</b>	<b>SPECIAL PROVISIONS</b>	<b>Special Provisions for Firefighting and Rescue shall comply with QCD FLS Annex and as modified in item 4.0 of this FLS Occupancy Chapter.</b>			
4.1	FIRE (EMERGENCY) COMMAND CENTER (FCC)	QCD FLS Annex_A5 – Revisions_2021.	Required	Required	Required
4.2	FIREMAN'S ACCESS PANELS/ OPENINGS	QCD FLS Annex_A3 – Revisions_2021	Required	Required	Required
4.3	FIRE LIFTS (FIRE SERVICE ACCESS ELEVATORS)	QCD FLS Annex_A4 – Revisions_2021	NR-Not Required	NR	Required
4.3.1		The building basement/s is more than nine (9) meters below the average ground level (grade plane).	Required	Required	Required
4.3.2	FIREFIGHTING LOBBY	QCD FLS Annex_A2 – Revisions_2021	Required	Required	Required
4.3.3	SMOKE-STOP LOBBY	QCD FLS Annex_A2 – Revisions_2021	Required	Required	Required
4.4	AMBULANCE STRETCHER ACCOMMODATION	QCD FLS Annex_A4 – Revisions_2021	NR	Required	Required
4.5	EXTERNAL ACCESS TO SITE AND BUILDINGS	QCD FLS Annex_A3 – Revisions_2021	Required	Required	Required
4.5.1	SITE ACCESS/ACCESS ROAD	For gated facility development a 4.0 m wide access road and 4.5 m clear height vertical clearance entry gate or site access shall be provided.	Required	Required	Required





Item	Fire Safety Provisions	Minimum Requirements	Low-rise	Mid-rise	High-rise
4.5.2	FIRE ENGINE HARDSTANDING (FEH)	FEH with longer side parallel to the façade of the building shall be provided in buildings exceeding the habitable height of 10 m.	Required	Required	Required
4.6	REFUGE FLOORS	QCD FLS Annex_A1 – Revisions_2021	NA-Not Applicable	NA-Not Applicable	Required
4.7	(Reserved).				
<b>5.0</b>	<b>BUILDING SERVICES and FIRE PROTECTION EQUIPMENT</b>	<b>Building Services and Fire Protection Equipment shall comply with the applicable NFPA codes and standards and QCD FLS Annex.</b>			
5.1	ELECTRICAL SYSTEM	Electrical wiring and equipment shall be in accordance with NFPA 70.	Required	Required	Required
5.1.1	ELECTRICAL EQUIPMENT/ PANEL ROOMS AND SIMILAR ROOMS/SPACES	QCD FLS Annex _A7 – Revisions_2021	Required	Required	Required
5.1.2	EMERGENCY GENERATORS AND STANDBY POWER SYSTEMS.	Emergency generators and standby power systems shall be installed, tested, and maintained in accordance with NFPA 110.	Required	Required	Required
5.1.3	STORED ELECTRICAL ENERGY SYSTEMS	Stored electrical energy systems shall be installed, tested, and maintained in accordance with NFPA 111.	Required	Required	Required
5.2	COMMERCIAL COOKING OPERATIONS	Where permitted, commercial cooking operations shall be protected in accordance with NFPA 96.	Required	Required	Required
5.3	ELEVATORS, ESCALATORS, and CONVEYORS	An elevator, shall not be considered a component in a required means of egress and shall be in accordance with NFPA 101 section 9.4.	Required	Required	Required
5.3.1	NUMBER OF CARS	The number of elevator cars permitted in a hoistway shall be not more than three (3).	Required	Required	Required
5.3.2	OPENINGS TO EXIT ENCLOSURES	Conveyors, elevators, dumbwaiters, and pneumatic conveyors serving various stories of a building shall not open to an exit enclosure.	Required	Required	Required



Item	Fire Safety Provisions	Minimum Requirements	Low-rise	Mid-rise	High-rise
5.4	WASTE HANDLING SYSTEM	Waste chutes and its associated trash collection storage rooms and service opening rooms, when provided shall comply with NFPA 101 section 9.5.	Required	Required	Required
5.4.1		Approved waste chutes and transport systems, including gravity waste chutes, full pneumatic waste conveying systems, and gravity pneumatic waste conveying systems, shall comply with the provisions of NFPA 82.	Required	Required	Required
5.4.1.1	Construction	Waste chutes, shall be separately enclosed by walls or partitions of not less than 2-hrs fire resistance rating and chute intake openings protection of 1.5-hour fire protection rating.	Required	Required	Required
5.4.1.2	Trash Collection Storage Rooms	Waste chutes shall have its associated trash collection, service opening rooms separately enclosed by walls of not less than 1-hr fire resistance rating and openings protection of 3/4-hour fire protection rating.	Required	Required	Required
5.4.1.3		The doors of chutes shall open only to a trash collection, service opening room, laundry storage room or to a room that is designed and used exclusively for accessing the chute opening.	Required	Required	Required
5.4.2	GRAVITY CHUTES	A waste chute shall extend (full size) at least 0.92 m. above the roof of a building.	Required	Required	Required
5.4.2.1		The chute shall be open to the atmosphere, with the opening being the same cross-sectional area as the chute.	Required	Required	Required
5.5	FIRE PUMPS				
5.5.1	FIRE PUMPS ROOM	QCD FLS Annex _A6 – Revisions_2021	Required	Required	Required
5.6	SUBSTATION and SWITCHGEARS	QCD FLS Annex _A8 – Revisions_2021	Required	Required	Required
5.7	(Reserved).				