

FIRE LIFTS / FIRE SERVICE ACCESS ELEVATORS





FLS	FIRE LIFTS / FIRE SERVICE ACCESS ELEVATORS	
A4	Fire and Life Safety (FLS) Requirements Annex_4	Revisions_2021
Item	Provisions	Notes
1.0	General.	
1.1	Every floor of any building shall be served by the required minimum number of fire lifts (FL)/fire service access elevators (FSAE):	
1.1.1	In any building, in which the habitable height is 28.0 meters or above the lowest level of fire department vehicle access*, and/or	In High-rise Buildings
1.1.2	The building basement/s is more than 9.0 meters below the lowest level of fire department vehicle access*.	Basement depth >9 m.
	* Reference level to measure the basement depth and habitable height.	
1.2	Fire lifts/fire service access elevators shall be contained within a separate protected shaft.	
1.3	A lift/elevator mainly intended for the transport of goods shall not be designated as a fire lifts/fire service access elevators.	
2.0	Minimum Number of Fire Lifts.	
2.1	In buildings of equal or more than 28.0 m habitable height and/or with basement/s exceeding 9.0 m. below the lowest level of fire department vehicle access, at least one (1) fire lifts/fire service access elevator with minimum 1590 kg and serving the lowest level of fire department vehicle access and all floors above, shall be provided.	One (1) FL in equal or over 28 m. and/or more than 9 m depth basement/s
2.2	In buildings with an occupied floor over 36.0 m in height above the lowest level of fire department vehicle access, a minimum of two (2) fire lift/fire service access elevators, each having a minimum 1590 kg capacity and serving the lowest level of fire department vehicle access and all floors above, shall be provided to serve as fire service access elevators.	Two (2) FL in 36 m. or more (super high-rise)
2.3	The fire lifts/fire service access elevator shall be sized and arranged in accordance with the requirements in item 8.0 Ambulance Stretcher Accommodation (ASA) Elevator.	All FL shall be sized as Ambulance Stretcher Accommodation Lift
2.4	When a minimum of two (2) fire lifts/fire service access elevators are required in 2.2, a minimum of one (1) fire lifts/fire service access elevator shall be provided for every 900 m ² floor area.	When two (2) FL are required provide one (1) FL in every 900 m ²
3.0	Firefighting Lobby.	



Item	Provisions	Notes
3.1	Each fire lifts/fire service access elevators shall open into or served at each story by a firefighting lobby.	
3.2	Where a fire lift/fire service access elevator has two entrances onto a floor, the second entrance shall not be required to open into a firefighting lobby. As a compensatory measure, pressurization shall be provided to the lift/elevator shaft.	
3.3	The firefighting lobby, considered as part of the smoke proof enclosure (exit stair), shall be enclosed by barrier having 2-hours fire resistance rating with door assemblies of not less than a 1.5 hour fire protection rating and shall be self-closing or automatic closing.	
3.4	The firefighting lobby shall be pressurized to minimum 10 air changes per hour.	
3.5	Enclosed firefighting lobby shall not be required at the street floor or level of exit discharge.	
3.6	Firefighting Lobby floor area shall not be smaller than 6.0m ² and its least side dimension of not less than 2.0 meter clear width.	
4.0	Access.	
4.1	Fire lifts/fire service access elevators shall have access to every habitable floor above or below the designated floor.	
4.2	Fire lifts/fire service access elevators shall be adjacent and have direct access to an exit stair enclosure and be approached by a firefighting lobby at each story.	
5.0	Operational Features.	
5.1	Fire lifts/fire service access elevators shall be provided with an operational feature that would enable firemen to cancel first or earlier call which has been inadvertently made to the fire lift during an emergency. For instance, in a fire emergency when any one of the fire detection devices or fire alarm systems is activated, all the passenger lifts shall be brought to the designated floor (usually ground story) and park there with the lift landing doors remaining opened.	
5.2	Fire lifts/fire service access elevators shall also be provided with an operational feature at the ground story to recall the lift back to the ground floor after fire fighter uses it.	
6.0	Power Supply.	
6.1	The power supply to the lift shall be connected to a sub-main circuit exclusive to the lift and independent of any other main or sub-main circuit. The power cables serving the lift installation shall be routed through an area of negligible fire risk.	



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6.2	The following buildings require the provision of standby generating plant for special emergency operations of fire lift/fire service elevators:	
6.2.1	Assembly, business, day-care educational, health care, hotel industrial, mercantile and industrial buildings; Residential buildings;	
6.2.2	Mixed developments where the passenger lifts serve both the residential and non-residential floors.	
7.0	Fire Lift/Fire Service Access Elevators Symbols.	
7.1	A pictorial symbol of the standardized design designating which lift/elevator are fire lifts/fire service access elevators shall be installed on each side of the hoist way door frame on the portion of the frame at right angles to the fire fighting lobby.	See Figure A.
	Figure A. Fire Lift/Fire Service Access Elevators Symbols.	 <p>Figure A</p>
7.2	The fire lifts/fire service access elevators shall comply with the following:	
7.3	The symbol shall be minimum of 3in. (76 mm) in height.	
7.4	The vertical centerline of the symbol shall be centered on the hoistway door frame. Each symbol shall be not less than 78 in. (1981 mm) and not more than 84 in. (2134 mm) above the finish floor at the threshold	
8.0	Ambulance Stretcher Accommodation (ASA)	 <p>Figure B. Star of Life</p>
8.1	In buildings with a habitable height of 18m and above, a minimum of one lift/elevator shall be provided for fire fighter emergency operation to all floors.	
8.2	When fire lifts/fire service access elevators are required, one shall be designated as an Ambulance Stretcher Accommodation.	
8.3	The elevator car shall be sized and arranged to accommodate a 610 mm × 2130 mm ambulance stretcher with minimum 125-mm radius corners in the horizontal, open position.	
8.4	The lift/elevator car shall be identified by the international symbol for emergency medical services (star of life). The symbol shall be minimum 3 in. (75 mm) in height and shall be located inside the car on both sides of the door frame.	