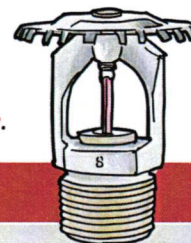


THE 2018 IBC SPRINKLER CHEATSHEET

A summary of requirements under the 2018 IBC. For more, visit www.meyerfire.com/subscribe.



	Where	Max Fire Area	Max Occupant	Other Requirement(s)	Basis
By Occupancy					
A: All	S ¹	-	300 +	· Where an occupied roof has assembly occupancy over 300 (or 100 for Group A-2) ²	903.2.1.6
A: All	B ³	-	300 +	· Where multiple A-1, A-2, A-3, or A-4 Areas share exit access and the combined occupant load is 300 or more	903.2.1.7
A: Smoke-Protected Seating	A ⁴	-	-	· Where area is used as smoke-protected seating	1029.6.2.3
A-1	S ¹	12,000 ft ²	300 +	· Where A-1 Area is on a floor other than level of exit discharge, or · Contains multi-theater complex	903.2.1.1
A-2	S ¹	5,000 ft ²	100 +	· Where A-2 is located on a floor other than a level of exit discharge · Where an occupied roof has assembly occupancy over 100	903.2.1.2 903.2.1.6
A-3	S ¹	12,000 ft ²	300 +	· Where A-3 is located on a floor other than a level of exit discharge	903.2.1.3
A-4	S ¹	12,000 ft ²	300 +	· Where A-4 is located on a floor other than a level of exit discharge	903.2.1.4
A-5	O ⁵	1,000 ft ²	-	· Space under grandstands required if over 1,000 sqft or is not constructed in accordance with 1029.1.1.1. · 4 + incapable of self-preservation, or	903.2.1.5
B: Ambulatory Care	F ⁶	-	-	· 1 + incapable of self-preservation that is not on the level of exit discharge	903.2.2
E	B ³	12,000 ft ²	300 +	· If E area is located on floor other than level of discharge ⁷	903.2.4
F-1	B ³	2,500 ft ² (upholstered furniture or mattresses) 12,000 ft ² (single) 24,000 ft ² (combined F-1)	-	· If Group F-1 is more than 3 stories above grade plane · Throughout all F-1 areas containing wood-working operations over 2,500 sqft that generate finely divided combustible waste or material	903.2.4 903.2.4 903.2.4
H	O ⁸	0 ft ²	-	· Throughout any high-hazard occupancy · Provided where nitrate film or pyroxylin plastics are manufactured, stored, or handled above 100 lbs	903.2.5.1 903.2.5.3
H-5	B ³	0 ft ²	-	· Throughout buildings containing H-5 Occupancy	903.2.5.2
I	B ³	0 ft ²	-	· Throughout buildings with Group I ⁹	903.2.6
I-2	-	-	-	· Through any smoke compartment with sleeping room	407.7
M	B ³	5,000 ft ² (upholstered furniture / mattresses) 12,000 ft ² (single) 24,000 ft ² (combined)	-	· Where more than 3 stories above grade plane · Where storage of merchandise is in high-piled or rack storage array	903.2.7 903.2.7.1
R	B ³	0 ft ²	-	· Throughout all buildings with Group R fire area	903.2.8

¹ S: System Required on floor containing occupancy, level of exit discharge, and all floors in-between

² Except Type I or Type II Open Parking Garages, per 903.2.1.6

³ B: System Required Throughout Building

⁴ A: System Required Throughout Enclosed Areas, except floor area where roof is more than 50 feet above floor level, press boxes less than 1,000 sqft, and outdoor seating where means of egress in seating area are essentially open to the outside

⁵ O: System Required Throughout all enclosed A-5 accessory use areas in excess of 1,000 sqft

⁶ F: System Required Throughout Entire Floor containing the occupancy

⁷ Except sprinklers are not required on the level below classrooms if every classroom has an exterior exit at ground level

⁸ O: System Required Throughout the Occupancy

⁹ Except where I-4 care are at level of exit discharge and where every room has at least one exterior door, per 903.2.6. For I-4 day care areas on a level other than exit discharge, sprinkler systems are only required on the I-4 floor, exit discharge floor, all floors in-between, and all floors below the discharge level.

S-1	B ³	2,500 ft ² (up. furniture) 5,000 ft ² (commercial motor vehicles) 12,000 ft ² (single area) 24,000 ft ² (combined) 0 ft ² (if in basement)	-	· Where located more than 3 stories above grade plane	903.2.9
S-1 Repair Garage	B ³	5,000 ft ² (comm. repair) 10,000 ft ² (2+ story) 12,000 ft ² (1 story)	-	· Two or more stories above grade plane with fire area containing repair garage over 10,000 sqft	903.2.9.1
S-1 Tire Storage	B ³	20,000 cubic ft	-	-	903.2.9.2
S-2 Enclosed Parking Garage	B ³	12,000 ft ²	-	· Where located beneath other groups (except R-3)	903.2.10
S-2 Commercial Parking Garage	B ³	5,000 ft ²	-	-	903.2.10.1
Other					
Aircraft Hangers	B ³	-	-	· Designed under NFPA 409 based on classification · Throughout entire building, except where atrium is separated per 707, or 711, or in atrium where atrium is 55 ft or taller	412.3.6 404.3
Atriums	B ³	-	-	· Installed where sprinkler system is used to comply with IBC Section 904. · In any high-hazard drying room	903.2.11.5 417.4
Commercial Cooking	Hood	-	-	· Where required by IMC for ducts conveying hazardous exhaust or flammable/combustible materials, except where duct is under 10-inches.	903.2.11.4
Drying Rooms	-	-	-	· Installed throughout highrise buildings · Throughout Higher-Ed laboratory suites · Throughout the unit	403.3 428.3.9 419.5
Hazardous Duct Exhaust	Duct	-	-	· Installed throughout covered and open mall buildings · Throughout, except when less than 1,000 sqft and exit access travel distance is less than 50 feet	402.5 411.4
Highrise	B ³	-	-	· In all spray rooms and spray booths · See footnote ¹⁰	416.5 410.6
Lab Suites	-	-	-	· See 903.2.11.1 for minimum opening dimension & access	903.2.11.1
Live/Work Units	-	-	-	· Where one or more stories with occupant load of 30 or more with finished floor 55 ft or more above lowest level of FD access, except open parking structures and occupancies in Group F-2	903.2.11.3
Mall	B ³	-	-	· Occupied floor level over 35 ft above FD vehicle access	412.2.4
Special Amusement	B ³	1,000 ft ²	-	· Where trash and linen chutes are provided: required at top of chute, in rooms, and alternate floors. See ref.	903.2.11.2
Spray Booths	-	-	-	· Where floor level is more than 30 feet below finished floor of the lowest level of exit discharge	405.3
Stages	T ¹⁰	-	-		
Stories w/o Openings	B ³	1,500 ft ²	-		
Tall Buildings	B ³	-	-		
Traffic Control	B ³	-	-		
Trash/Linen Chutes	Chute	-	-		
Underground Structures	S ¹	-	-		

Inclusion of sprinkler systems may also be mandated by insurance companies, local code ordinances, or preferred by the building owner.

Where applicable, see the International Fire Code Table 903.2.11.6 for additional required fire protection applications. These include dry cleaning, fuel-dispensing areas, dip tanks, HPM facilities, lumber production, recycling facilities, ovens, storage of flammable and combustible liquids, gas rooms, exhaust enclosures, hazardous materials, aerosol product warehouses, medical gas storage, propellant storage, toxic gases, and pyroxylin plastics.

Aside from many documented life-safety and building protection benefits for fire sprinkler systems, their inclusion can also offer the following code benefits: Increased Allowable Building Height, Increased Allowable Number of Stories, Increased Allowable Building Area, Egress Width & Exit Discharge Decreases, Travel Distance Increases, Rating Reductions for Separated Occupancies, Rating Reductions for Fire Partitions, Rating Reductions for Corridor Walls, Rating Reductions for Incidental Uses, Draftstopping Reductions, Removal of Manual Pull Stations, Hazardous Material Storage Increases, Atrium Use Allowances, Unlimited Area Buildings, Allowable Area of Openings, Vertical Separation of Openings, Interior Finish Reductions, and Floor Finish Reductions

¹⁰ T: Required under roof, gridiron, catwalks, and galleries over the stage, in dressing rooms, performer lounges, shops and storerooms accessory to stages. Exceptions for short separated stages, small stages, or portable orchestra enclosures. See 410.6.