

# Harvard style references



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General Directorate of Civil Defence Fire Safety Requirements against the NFPA s/Standards GDCD has adopted in full the requirements of NFPA s and Standards for implementation in Qatar supplementing them with its own fire safety standards to achieve its goal of safeguarding life and properties.

Through these regulations specific strategies could be built in preventing fires from occurring and to manage its impact when they occur through some failure.

The GDCD Fire Safety Standards have some deviations from the NFPA requirements. Unlike the NFPA Code/Standards, the local fire safety standard is more general in form and does not have specific requirements for each class of occupancies. Its provisions are centred on the basic requirements of a particular component in the building rather than the whole building requirements.

### Building Construction

Building construction in Qatar can be generally classified into Type II (Non-combustible) if not Type I (Fire Resistive) constructions. Due to the climatic condition in the country in which a temperature of more than 50 °C is reached during peak summertime, buildings of Type III (Limited Combustible) and Type IV (Heavy Timber) constructions whose conditions to easily catch fire can be aggravated by the dry summer season are rarely built in Qatar. Application of the NFPA 5000, Building Construction and Safety Code, and the Qatar Construction Standard are implemented strictly in Qatar.

### Means of Egress

GDCD implements in full the provisions of NFPA 101, Life Safety Code, to establish specific requirements for means of egress. While all concepts incorporated in the code are important, means of egress could be singled out

as the most important of them all as this is the last recourse where all of the fire safety strategies (prevention, communication, containment and extinguishment) fail. The ability of the occupants to quickly and efficiently exit the building is often the difference between life and death.

#### Fire Suppression Systems

NFPA 13, Standard for the Installation of Sprinkler System, is the main standard used by QDCD to establish specific requirements for automatic sprinkler system design and installation in buildings. The local fire safety standard establishes the criteria when automatic sprinkler system is required.

NFPA 14, Standard for the Installation of Standpipe and Hose Systems, is used by GDCD to establish minimum requirements for the design and installation of Standpipes or Rising Mains, the term used in the local Fire Safety Standard. The local fire safety standards prescribe the criteria when standpipe is required and the type of standpipe is required for a particular building. The location or placement of the standpipe (rising main) and its associated hose valves (landing valve) in the building also has an order of priority under the local fire safety standard.

NFPA 15, Standard for Water Spray Fixed System for Fire Protection, is used by GDCD to establish specific performance requirements based on design objectives appropriate to numerous specialized hazards. Fixed Water Spray System is widely used to protect oil-cooled transformers in Power Transmission System Substations in Qatar.

NFPA 10, Standards for Portable Fire Extinguishers, is used to establish requirements for the provision of portable fire extinguishers in the building or structures. While portable fire extinguishers are not generally considered

part of the building's fire suppression system, its importance as first-aid fire fighting appliances could play significant role in putting out incipient fire in the building.

A lot more NFPA Codes and Standards are being used in Qatar to establish specific requirements in the design and installation of fire suppression system. The most common are the NFPA 2001, Standard on Clean Agent Fire Extinguishing System, NFPA 750, Standard on Water Mist Fire Protection, NFPA 11, Standard for Low-, Medium- and High Expansion Foam. The use of Carbon Dioxide Extinguishing System, as provided in NFPA 12 Standard, is however, discouraged if not strictly regulated in Qatar.

#### Fire Detection and Alarm Signalling System

One of the most important fire safety installations in a building, which could be vital in ability of the occupants to quickly and efficiently exit the building, is the fire detection and alarm system (FDAS). Provisions of NFPA 70, National Electrical Code and NFPA 72, National Fire Alarm and Signalling Code are adopted in Qatar to establish requirements in the design and installation of fire detection and alarm system.

#### Smoke Control and Emergency Ventilation System

The provision of smoke control system can significantly improve the life safety of the building. A properly designed and installed smoke control system will keep escape and access routes free from smoke, delay or prevent fire from subsequent development and reaching flashover, facilitate fire fighting operations through the creation of smoke free layer, protect the contents and reduce the thermal effect on structural components of the building. NFPA 92A, Standard for Smoke Control System Utilizing Barriers and Pressure Difference, NFPA 92B, Standard for Smoke Management in Malls,

Atria and Large Spaces and NFPA 88A, Standard for Parking Structures, are the referenced standards adopted by GDCD and widely used in Qatar to meet the specific smoke control objectives.

Several other Codes and Standards from NFPA were adopted by GDCD to establish safety requirements against the disastrous effects of fire. As previously mentioned in this report, some of the requirements in the NFPA Codes or Standards were modified or enhanced by the local fire safety standards to suit with the country's special requirements and added safety as well.

## References

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