In compliance with the directions passed by the Hon'ble Supreme Court of India in W.P. (C) No. 483/04 in the matter of Avinash Mehrotra V/s U.O.I. & others dated 13/04/2009 and keeping in view the provisions of Delhi Fire Service Act 2007 (Delhi Act 2 of 2009) and Delhi Fire Service Rules 2010 enacted w.e.f 01.07.2010 and in exercise of the powers conferred under section 3 of the Delhi School Education Act, 1973 and Rule 43 of the Delhi School Education Rules, 1973, and all other enabling provisions under the said Act & Rules, the fire & life safety provisions in the school buildings shall be as stipulated herein after:

1. The fire and life safety provisions in all new school buildings shall be in accordance with the National Building Code of India, 2005/Building Bye-laws as amended from time to time.

2. All the existing school buildings that are comprised of ground floor only shall provide fire & life safety provisions as under:-
   a. **Access:** The building shall be accessible to Fire Engines.
   b. **Number of doors in a class room:** All the class rooms having students more than 45 shall have minimum two doors each 1.0 meters wide.
   c. **Fire extinguishers:** One carbon di-oxide type fire extinguisher 2.5 kgs capacity and ISI marked or one ABC type fire extinguisher with ISI marked shall be provided for every 300 square meters of covered area or part thereof on each floor subject to a minimum of two such extinguishers for every floor. In addition, one fire extinguisher each in laboratory, near to the electrical installation and/or generator room shall also be provided.
   d. The basement if any, having area more than 200 square meters shall be provided with sprinkler system.
   e. **Captive water storage for fire fighting and pumping arrangements:** For sprinkler system in basement, a fire pump with 450 liters per minute discharge at 40 meters head (4 kgf/sq. cm.) along with an overhead tank of 5000 liters capacity shall be provided. The pump operation shall be automatic with the actuation of sprinkler system. The overhead water storage tank shall be exclusively for sprinkler system.

3. All the existing school buildings that are comprised of ground plus one upper floor (less than 9 meters in height) shall provide fire & life safety provisions as under:-
   a. **Access:** The building shall be accessible to Fire Engines.
   b. **Number of doors (exits) in a class room:** All the class rooms having students more than 45 shall have minimum two doors each 1.0 meter wide.
   c. **Staircase:** (a) There shall be at least one staircase of 1.5 meters width. If the travel distance is more than 30 meters then one additional staircase of 1.5 meters width is required to be provided.
(b) For all existing schools if the width of the main staircase is less than 1.5 meters then an additional fire escape staircase not less than 0.75 meters wide shall be provided.

d. **Fire extinguishers**: One carbon di-oxide type fire extinguisher 2.5 kgs capacity and ISI marked or one ABC type fire extinguisher with ISI mark shall be provided for every 300 square meters of covered area or part thereof on each floor subject to a minimum of two such extinguishers for every floor. In addition, one fire extinguisher each in laboratory, near to the electrical installation and/or generator room shall also be provided.

e. The basement if any, having area more than 200 square meters shall be provided with sprinkler system.

f. **Captive water storage for fire fighting and pumping arrangements**: For sprinkler system in basement, a fire pump with 450 liters per minute discharge at 40 meters head (4 kgf/sq. cm.) along with an overhead tank of 5000 liters capacity shall be provided. The pump operation shall be automatic with the actuation of sprinkler system. The overhead water storage tank shall be exclusively for sprinkler system.

4. **All the existing school buildings that are ground plus two or more upper floors or more than 9 meters and up to 15 meters in height shall provide fire & life safety provisions as under:-**

   a) **Access**: The building shall be accessible to Fire engines.

   b) **Staircase**: (i) There shall be at least one staircase of 1.5 meters width. If the travel distance is more than 30 meters then one additional staircase of 1.5 meters width is required to be provided.

      (ii) For all existing schools if the width of the main staircase is less than 1.5 meters then an additional fire escape staircase not less than 0.75 meters wide shall be provided.

   c) **Number of doors (exits) in a class room**: All the class rooms having students more than 45 shall have minimum two doors each 1.0 meter wide.

   d) **Fire Extinguishers**: One carbon di-oxide type fire extinguisher 2.5 Kg capacity, ISI or one ABC type fire extinguisher with ISI mark shall be provided for every 300 m² of covered area or part thereof subject to a minimum of two such extinguishers for every floor. In addition, one fire extinguisher each in laboratory, near to electrical installation and/or generator room shall also be provided.

   e) **First Aid Hose Reels**: A hose reel containing 30m of length and 20 mm bore terminating in to a shut-off nozzle of 5 mm outlet connected to the pump shall be provided for every 1000sqm. of covered area subject to a minimum of one hose reel per floor of the building.

   f) The basement if any, having area more than 200 m² shall be provided with sprinkler system.

   g) **Captive water storage for fire fighting**: An overhead water tank having 10,000 liters capacity (15,000 liters in case of buildings having sprinkler system in basement) shall be provided exclusively for fire fighting systems.
h) **Pumping Arrangements:** A fire pump having 450 liters per minute output at 40 meters head (4 Kg/sq. cm.) mounted at terrace for feeding hose reel and additional pump of similar capacity i.e. 450 liters per minute at 40 meters head if the basement of building is provided with sprinkler system, shall be installed at the terrace. All the pumps shall be automatic in operation.

i) **Exit Signage:** Exit signs shall be provided in the building at all exits and escape routes at appropriate locations.

5. **All the existing school buildings that more than 15 meters in height shall provide fire & life safety provisions as under:-**

   a) **Access:** The building shall be accessible to Fire engines.

   b) **Staircase:** (i) There shall be at minimum two staircase each 1.5 meters wide. If the travel distance is more than 30 meters then one additional staircase of 1.5 meters width is required to be provided.

   (ii) For all existing schools if the width of the main staircase is less than 1.5 meters then an additional fire escape staircase not less than 0.75 meters wide shall be provided.

   c) **Number of doors (exits) in a class room:** All the class rooms having students more than 45 shall have minimum two doors each 1.0 meter wide.

   d) **Fire Extinguishers:** One carbon di-oxide type fire extinguisher 2.5 Kg capacity, ISI or one ABC type fire extinguisher with ISI mark shall be provided for every 300 Sqm. of covered area or part thereof subject to a minimum of two such extinguishers for every floor. In addition, one fire extinguisher each in laboratory, near to electrical installation and/or generator room shall also be provided.

   e) **First Aid Hose Reels:** A hose reel containing 30m of length and 20 mm bore terminating into a shut-off nozzle of 5 mm outlet connected to the pump shall be provided for every 1000 sqm. of covered area subject to a minimum of one hose reel per floor of the building.

   f) **Internal Hydrants:** A down comer system along with internal hydrant and hose box on every floor containing two lengths (15 meters each) having 50 mm diameter delivery hose complete with 63mm instantaneous couplings and a 12 mm diameter nozzle shall be provided for every 1000 m² of covered area.

   g) **Captive water storage for fire fighting:** An overhead water tank having 25000 liters shall be provided exclusively for fire fighting systems.

   h) The basement of any having area more than 200 sqm. in the building, shall be provided with sprinkler system.

   i) **Pumping Arrangements:** A fire pump having 900 liters per minute output at 40 meters head shall be installed at the terrace and all the pumps shall be automatic in operation.

   j) **MOEFA:** Manually operated electrical Fire Alarm (MOEFA) shall be provided at suitable locations on each floor of the building.

   k) **Exit Signs:** Exit signs shall be provided in the building at all exits and escape routes at appropriate locations.
l) **Stand by power supply:** The standby electric generator/ alternative source of supply of adequate capacity shall be installed to supply power to staircase and corridor lighting circuit, lifts, exit signs and fire pump in case of failure of normal electric supply. The generator shall be capable of taking starting current of all the machines and circuits stated above simultaneously and must be automatic in action.

m) **Protection of exits by means of Fire check door(s) and or pressurization:** The Fire check doors of minimum 1 hour fire resistance rating shall be provided at appropriate places along the escape route and particularly at the entrance to lift lobby and stair well, where a funnel or flue effect may be created, inducing an upward spread of fire to prevent spread of fire and smoke. Pressurization system for staircase, lift shaft and lift lobby or corridor, shall be installed as per National Building Code of India Part-IV.

n) **Compartmentation:** The building shall be suitably compartmentalized so that the fire/smoke remain confined to the area where fire incidents has occurred and does not spread to the remaining part of the building. The services, standby generator, store etc. must be segregated from other by erecting fire-resisting wall of not less than 4 hours rating. Each of the compartments must be individually ventilated and the opening for entry into each of these compartments must be fitted with self-closing fire/smoke check doors of not less than one hour fire rating fitted with magnetic latches.

o) All electric cables shall be laid in separate shafts, sealed at every floor with fire resisting material of similar rating. Under no circumstances, two services shall pass through the same shaft, i.e. separate shaft be used for different purpose.

p) The entry to the staircase from all levels shall be segregated with a self-closing fire/ smoke check door of not less than 1 hour fire resistance rating. All vertical and horizontal opening at each floor level in entire building shall be sealed properly with the non-combustible material. Wherever false ceiling/suspended ceiling is provided, the same shall be of non-combustible in nature and compartmentation shall be extended up to ceiling level. The staircase of basements shall be of enclosed type having fire resistance of not less than 2 h and shall be situated at the periphery of the basement to be entered at ground level only from the open air and in such positions that smoke from any fire in the basement shall not obstruct any exit serving the ground and upper stores of the building and shall communicate with basement through a lobby provided with fire resisting self closing doors of 1 hour resistance.

q) **Smoke management systems:** The building shall be provided with the ventilation strictly in accordance with Part-VIII Section-I and Clause C-1.6 of Part-IV of National Building Code of India. Mechanical ventilation system having interlocking arrangements shall be provided in the basement so that extractors shall continue to operate and supply fan shall stop automatically on actuation of detector / sprinkler. Extractors shall be so designed to permit 30 air changes per hour in case of fire in basement. The smoke extraction system shall be designed as per NBC Part-IV. Air conditioning system shall conform to Section-3 Part-VIII and Clause C-1.17 of Part-IV National Building Code of India.
r) **PA System:** The public address system shall be provided in all building blocks, having loud speakers strategically located on each floor level. The microphone, amplifier and control switches of public address system shall be installed in the fire control room.

s) **Provision of Lifts:** The requirements of the lifts shall be in conformity with the NBC-IV. Grounding switch (s) shall be provided at ground level, shall be provided on all the lifts to enable the fire service to ground the lifts.

t) **Refuge Area:** One refuge area on the floor immediately above 24 meter of an area equivalent to 0.3 m² per person to accommodate the occupants of two consecutive floors, shall be provided.

u) **Fire Control Room:** A Fire Control room having communication system, details of floor plans etc. shall be established on the entrance floor.

6. **General Measures:** In addition to above all schools shall ensure compliance of the following safety measures as applicable:

   a) The non combustible material shall be used for construction of the school building.

   b) All escape routes shall be kept clear of any obstruction and all the gates shall be kept unlocked during the occupancy of the school building.

   c) There shall be proper facilities for storage of LPG cylinders in the laboratories; preferably, these LPG cylinders shall be kept in a separate enclosure away from the classrooms so that there is no threat of fire spreading in the building in case of leakage of gas from LPG cylinder. Wherever LPG is issued for laboratories etc. normal precaution for use of LPG must be observed e.g. LPG stove should be kept away from the electrical wiring which may cause sparks. Similarly, LPG cylinder should be kept at a place where adequate ventilation is available. The rubber tube carrying gas from the LPG cylinder to the stove should be checked regularly and replaced, if so required. In case smell of gas (indication of leakage of gas) is observed, match sticks should not be used and none of the electrical points should either be switched on or switched off. In case of leakage of gas, windows and doors should be opened. Under no circumstances, the electrical heater should be operated near the LPG installation. At the place where LPG cylinders are stored, necessary water spray system shall be provided through a manual control valve located about 15 meters away from such place of storage of the cylinder.

   d) Delhi Fire Service would be providing various types of posters for educating students and teachers on the issue of fire safety and that shall be displayed prominently in the school premises. In some cases, it might even be desirable to keep permanent boards prepared on issues related to fire safety.

   e) The electrical wirings in the school building shall be laid in metal conduit or shall be concealed type. Wherever, there is external wiring, the concerned school shall take steps to get it laid in metal conduits or shall be concealed within a period of 6 months from the date of issue of this circular.

   f) The electrical circuit should not be overloaded. MCB and ELCB shall be provided in electrical installation.
g) As far as possible, the electrical meter board should not be installed in staircase and wherever already installed, it shall be either got removed or enclosed in a metallic box.

h) Non combustible material and/or material with surface flame spread of class ‘1’ rating shall be used for erection of false ceiling, wall paneling etc.

i) Basement, if any, shall be used as per Building Bye Laws, 1983.

j) School Chowkidar/Caretaker shall switch off all electrical equipment/installations after school hours or after closing of school, which ever is later.

k) The emergency telephone numbers i.e. 100, 101 and 102 as well as the telephone numbers of nearest fire station and nearest police station shall be displayed prominently in the school building.

l) Fire/Evacuation Drill should be conducted at least once in 6 months. Request in this regard may be sent to the Delhi Fire Service at least one month in advance so that the Delhi Fire Services can depute its personnel to supervise and advise on the Fire/Evacuation drill.

m) Wherever generator set is used in the school premises, apart from necessary precautions to take care of noise or air pollution, it should be ensured that this generator set is located either on a separate floor or in a separate part of the building with direct access from outside.

n) Schools shall not be allowed in temporary structures such as tents, pandals etc.

7. Fire & Life Safety in Auditorium:- All the Schools that have auditorium shall provide following fire & life safety measures:-

a) One exit having 1.5 meters clear width for every 150 seating capacity subject to a minimum of two such exits located as remote to each other as possible shall be provided in the Auditorium. The exit gates must always open outwards.

b) First aid hose reel shall be provided in the auditorium on either side of the stage.

c) In case, stage is made of wood and/or curtains are provided at the stage, automatic sprinkler system shall be provided to protect the stage only.

d) The basement if any, having area more than 200 SQM, shall be provided with sprinkler system.

e) Emergency light shall be provided.

f) Illuminated exit signs shall be provided at each exit gate.

g) Sufficient number of exhaust fans shall also be provided near the ceiling level for ventilation of smoke in case of fire.

h) In case of Auditoriums or buildings having basements of area more than 200 m², a fire pump of capacity 450 liters per minute at 40 meters head (4Kgf/sq cm.) along with overhead water storage tank of 5000 liters exclusively for fire fighting shall be provided at the terrace to feed sprinkler system. All the pumps shall be automatic in operation.

8. Other Measures:

a) As a part of good house keeping, it must be ensured that no combustible materials are allowed to accumulate or any space is left un-cleaned. The combustible material shall be contained in the collectors that they don’t spread by wind lest it becomes a fire hazard.

b) The above measures/precautions are not sufficient for building where the original occupancy allowed as per law is altered or where the buildings are partly or fully air-conditioned. In
such buildings, the school must get the building inspected by officers of Delhi Fire Service and obtained detailed recommendations about the fire safety measures.

c) In the cases of fresh recognition/up-gradation, the applicant schools must comply with guidelines issued by the Director of Education and enclose clearance from the Delhi Fire Service with their application for grant of recognition/up-gradation.

d) In case of any difficulty in understanding the technical terms or contents of this circular, the Chief Fire Officer/Dy. Chief Fire Officer concerned may be consulted to provide clarification/advice on the issues. The telephone number of the Chief Fire Officer and Deputy Chief Fire Officer of Delhi Fire Service is given below:-

Chief Fire Officer : 23414250
DY. Chief Fire Officer : 26189168

Head of School/Management of all the Schools including Govt. schools shall apply/approach to Directorate of Delhi Fire Service, Connaught Place, New Delhi to obtain Fire Safety Certificate. The authorities concerned shall take necessary action and ensure that Fire Safety measures are provided in all Schools and Fire Safety Certificate obtained by them in time bound manner.

(P. Krishnamurthy)
Director Education

1. The Manager
   All the recognized/Aided/Unaided Schools
   Through concerned DDEs.
2. All the H.O.S. of Govt. Schools.


Copy forwarded to :-

1. Secretary to Minister of Education, Govt. of NCT of Delhi, Delhi
   Sachivalaya, New Delhi-110002.
2. PS to Pr. Secretary (Home), Govt. of NCT of Delhi, Delhi
   Sachivalaya, New Delhi-110002.
3. PS to Secretary Education, Govt. of NCT of Delhi, Old Sectt, Delhi-54.
4. Director, Dte. of Delhi Fire Service, Connaught Place, New Delhi-1.
5. The Addl. Director of Education (Act) / (School), Directorate of Education, Old Sectt., Delhi-54.
6. All RDEs/ DDEs/ E.Os/ DEOs Dte. of Education, Delhi / New Delhi.
7. All HOSs, Dte. of Education, Delhi / New Delhi through concerned DDEs.
8. Director (Education), MCD, Nigam Bhawan, Kashmere Gate, Delhi-6.
9. Director (Education), NDMC, Palika Kendra, Sansad Marg, New Delhi-1
11. Chief Executive Officer, Delhi Cantonment Board, Delhi Cantt., New Delhi.
13. Chairman-cum-Managing Director, DSIDC, 419 FIE, Patpur Ganj, Delhi.
14. Chief Engineer, Irrigation & Flood Control, 4th Floor, I.S.B.T. Building, Kashmere Gate, Delhi-110006.
15. Director, National Projects Construction Corporation Limited, Raja House, 30-31, Nehru Place, New Delhi-110019.
17. ADE (IT), Dte. of Education, Old Sec't., Delhi-110054 with request to upload on the website of the Department.
18. ADE (Personal), Director of Education, Old Sec't., Delhi-110054.

JDE (Estate)