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**PART II - MISCELLANEOUS NOTIFICATIONS OF INTEREST TO THE PUBLIC**

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**NOTIFICATIONS BY HEADS OF DEPARTMENTS Etc.,**

**DIRECTOR GENERAL**  
**DISASTER RESPONSE & FIRE SERVICES DEPARTMENT**  
**ANDHRA PRADESH**

**Lr.C.No.31 / DGFS / Camp / 2022.**

**Date: 16-06-2022.**

**NOTIFICATION FOR EDUCATIONAL INSTITUTIONS**

## NOTIFICATION FOR EDUCATIONAL INSTITUTIONS

### 1) Legal power governing the issue of “No Objection Certificate” (NOC) to Educational Institutions and landmark Supreme Court Judgment:

*a) According to Section 13 (1) of Andhra Pradesh Fire Service Act, 1999. Any person proposing to construct a building of more than 15 meters height for residential purpose, and buildings of public congregation like schools, cinema halls, function halls, religious places, which are more than 500 Sq. Meter in plot area or 6 meters and above in height shall apply to the Director General or any member of the service duly authorised by him in this behalf, before submission of such building plans to the authority or officer competent to approve the same under the relevant law, for the time being in force, for a **No Objection Certificate** along with such fee as may be prescribed.*

Educational Buildings include any building used for School, College, University, Coaching Center, administrative training institutes, training academies, all other professional training institutes involving assembly for instruction, education or recreation for not less than 20 students. It includes hostels, dormitories and other buildings located in the same campus.

In Surat Coaching Center located in a commercial complex, a devastating fire accident due to **Electrical Short Circuit** took place on 24<sup>th</sup> May 2019, afternoon. Spectators were horrified to see the rapid intensification of the fire, with the students clinging desperately to the exterior of the building to save themselves from its dense smoke effects, and ultimately falling down as they lost hold.

In this unfortunate incident 22 students of an **Unauthorised Coaching Center** located on top floor of 4-story commercial building with **Single Stair Case**, lost their lives.

**Therefore, it is mandatory to obtain NOC for all Coaching Centers.**

b) According to Section 13 (2) of Andhra Pradesh Fire Service Act, 1999. The Director General or any member of the service duly authorized by him in this behalf, shall **within sixty days** of receipt of such application, on being **satisfied** about the provision of fire prevention and safety measures as stipulated in the [National Building Code of India, as amended from time to time] or any other law for the time being in force regulating such purpose or activity, shall issue **No Objection Certificate** with such conditions as may be considered necessary and if not so satisfied, reject the same for reasons to be recorded in writing.

c) Supreme Court Judgment in Kumbakonam School fire accident (Writ petition (Civil) No. 483 of 2004):

This important case relates to a major fire accident that swept through the Lord Krishna Middle School in Kumbakonam District, Tamil Nadu State. The fire started in the school's kitchen while cooks were preparing mid-day meal. In this accident 93 children were burnt alive.

This unfortunate incident happened because the school building housed more than 900 students in a crowded, thatched-roof **structure of two floors with single narrow stairway. This highlights the importance of safe structure with two good ways of exit.**

The case also cites the following incident. In the year 1995, a school prize-giving ceremony in a Northern Indian town turned to tragedy when a fire broke out, killing nearly 400 people, many of them children and teenagers. The fire was caused by an **Electrical Short Circuit** in the town of Dabwali in the State of Haryana. This highlights the importance of ensuring "Electrical Safety". **Therefore, even temporary structures for assembly purpose must have multiple exits and observe "Electrical Safety Checklist". It shall be the responsibility of the Head of the Institution such as Head Master / Principal / Director / Registrar etc.**

***This notification not only gives effect to the directives of this Supreme Court Judgment prescribing authorized resilient technologies and modern methods, but also goes beyond the directives by mandating “Electrical Safety” in all Educational Institutions to prevent fires.***

**2) The purpose is :**

**First**, to define principles, standards and minimum requirements that will **satisfy** to meet the fire safety in all Educational buildings including coaching centers up to 10 floors for issuing “No Objection Certificate” as envisaged in Sec 13(2) of Andhra Pradesh Fire Services Act, 1999.

**Second**, to ensure compliance by notifying authorities competent to inspect, test and certify the functioning of fire safety Equipment and other safety measures such as exits etc.

**Third**, to lay down procedures for time bound disposal of applications for “No Objection Certificate” (NOC) **within sixty days** of its submission as prescribed in the Act, 1999. Following the doctrine of legitimate expectations, specifying the conditions for deemed approval in case of Renewal of “No Objection Certificate” applications.

And **finally**, to remove ambiguities and to notify Educational Institution buildings which don’t require “No Objection Certificate” to bring transparency in the process.

**3) The principles governing the Fire Safety Norms:**

An extract from the Foreword to Part 4 of the National Building Code.

*“Absolute safety from fire is not attainable in practice. The objective of this part is to specify measures that will provide the degree of safety from fire which can be reasonably achieved.*

*The Code endeavors to avoid requirements that might involve unreasonable hardship or unnecessary inconvenience or interference with normal use and occupancy of buildings but insists upon compliance with minimum standards of fire safety necessary for building occupants and users”.*

Analyzing the “Root Causes” of Fire accidents in Educational Institutions to prescribe reasonable **Fire Safety Measures to prevent the Fire accidents from happening in the first place, to save lives and to minimize damage to property.**

The Endeavour is to deploy modern technologies that are **resilient, maintenance free, easy to operate in case of emergency and don’t get rusted in the largely Coastal Environment** of the State.

The governing principle is to have large margin of Safety or failure proof deployment of Fire Fighting Equipment in “Decentralized Way” so that any individual Equipment failure will not affect the Fire Fighting capabilities as there are many similar Equipments in any building. Even the Fire Fighting Equipments of neighborhood buildings can also be used for fighting fire as all these pumps are designed to be “mobile” and can operate either on “Electric” or “Fuel motors” besides being versatile in drawing water from any source such as Sumps, Overhead tanks, any municipal water tanks, or any tap in the building or any well or drum.

Therefore, **the above versatility and mobility of the pumps deployed in buildings will multiply the margin of safety manifold unlike the case of immobile Centralized Pumping System.**

The above is just a layman expression of a well known mathematical proof that any Centralized Complex System with many interdependent components however reliable, is “fragile” compared to Decentralized System having independent components of similar reliability.

In any particular Educational Building the incidents of fire accidents are very rare events (very low probability events) as per the last 25 years recorded fire accidents in the State. Given human tendency to attend to immediate requirements and neglect rare occurrences (which is the principle reason why centralized dedicated fire equipment often doesn't work in case of emergency), we need to incorporate machines that are **maintenance free** and **multipurpose** that can be used for daily purposes such as ensuring hygiene/sanitation so that functioning and familiarity with the use of equipment are automatically ensured. ***This feature further enhances margin of Safety.***

Moreover, the building design Engineers to have flexibility in deploying any advanced technology pumps of different ratings depending on the Fire load expected.

***Above all, highest priority is accorded to Passive Safety measures such as ensuring two exits; not co-locating with highly inflammable shops having cloths, chemical or explosives; and following Electrical Safety Checklist.***

Finally, minimization of Energy use (Sustainability) and Cost Effectiveness are to be observed. Let us be comforted with the fact that "no educational institute is an island" in itself to handle any fire outbreak but thankfully, there are professional fire fighters spread across the State in about 180 Fire Stations available "on duty" 24 x 7 and 365 days.

Please refer Andhra Pradesh Government Gazette No. W.No.02, Dated.18-01-2022 authorizing the Decentralized System ; Aerosol, CO<sub>2</sub> , Neutral Gas and N<sub>2</sub> Flooding Systems.

**4) Root-Causes of Fire in Educational Institutions?**

- a) In our analysis of major fire accidents in Educational Buildings across India, the Root cause of fire is **Electrical Short Circuit in most of cases**, specially in Mixed Occupancy Buildings.
- b) Another cause is unsafe kitchens within educational building.
- c) Spillage of Chemicals in the laboratories and other causes.

**5) Safety measures mandated to prevent Electrical Origin Fires:**

<b>Electrical Safety Checklist</b>		
<b>What safety measures are mandated to reasonably mitigate Electrical Short Circuits ?</b>		<b>Compliance</b>
(i)	All Electrical wirings in the building shall confirm to the code of practise for Electrical wiring IS:732:1989 and also shall confirm for Fire Safety Wiring of the building Electrical Installations as per IS:1646:2015. Most common mistake is that the neutral wires to the three pin plugs are not of sufficient thickness to carry the current in case of any short circuits.	
(ii)	Installation of Miniature Circuit Breakers, (MCB s) in all floors.	
(iii)	No Overloading of power socket in any Educational Building.	
(iv)	10 years old wiring to be changed specially where ever high power consuming appliances such as Air conditioners, Electrical/Mechanical/Computer labs, Data Centers, High tech labs, MRI machines, X-ray in Medical Colleges etc.	
(v)	Grounding/Earthing Shall be done. For details refer IS 3043:1987.	
(vi)	Lightening conductors may be provided for high rise buildings exceeding 5 floors.	
(vii)	No High Tension Lines should run inside or in close proximity ( $\leq 6$ meters) to any Educational institution buildings.	
(viii)	All the above safety measures shall be Certified by the authorized Electrical Engineer.	
(ix)	<b>No "Conditional NOC" or "Renewal NOC" shall be issued without satisfying Electrical Safety Checklist including item 5(iv) above under any circumstances as this will compromise basic safety of students.</b>	

**6) Fire Safety Equipment to be installed for immediate response to fire breakout observing the principles stated below:**

<b>CHECKLIST FOR FIRE &amp; LIFE SAFETY IN EDUCATIONAL BUILDINGS</b>			
<b>S. No</b>	<b>Details of Parameter</b>	<b>Fire Safety Measure</b>	<b>Compliance</b>
1.	<b>Fire Fighting Equipment</b>	<p><b>a) One Fire Extinguisher of ABC/CO2 type for every 100 Sq. Meters Area:</b></p> <p>As most fires are of Electrical origin, the above Fire Extinguishers which are handy, easy to use and very effective against small fires are mandated to be provided in all parts of Educational Institutions within accessible distance on all floors.</p>	
2.	<b>Fire Fighting Equipment</b>	<p><b>b) Manually Operated Fire Alarm system:</b></p> <p>There is a need for an alarm system so that if there is a fire breakout in any part of institute, all the students/staff should be immediately alerted so that they can take appropriate actions as practiced in Mock Drills. As Educational Institutions mostly function in day time, we have mandated manual alarm systems to reduce false alarms in Indian conditions. However, reliable automated alarm systems can also be employed at the option of managements.</p>	
3.	<b>Fire Fighting Equipment</b>	<p><b>c) Water storage : 5,000 Liters (Overhead tank + Ground Sump), However, big schools having more than 1000 students to have 10,000 Liters of water minimum storage .</b></p> <p>There is a need for adequate water storage to fight fires using installed fire fighting Equipment. Building Architects are required to provide assured water storage that lasts for at least an hour when all the installed fire fighting Equipment is fully operational.</p>	



	<b>Fire Fighting Equipment</b>	<p>We have indicated minimum assured storage of 5,000 liters (over head tank + Ground Sump) for each building/ block in Educational Institutions. However, the architects are advised to make additional storage available using their judgment about water availability in the area and fire load expected in the buildings. In big campuses, where there are many buildings/blocks , architect can optimize the total storage as water can be shared between neighborhood blocks and normally fire doesn't happen in more than one block at a time.</p>	
4.	<b>Fire Fighting Equipment</b>	<p><b>d) Up to 05 Floors height of buildings :</b>  <b>Up to 05 floors with up to 1000 Students:</b>  2 HP (Pump + Electrical Motors connected to main Generator) @ one per each floor connected to normal plumbing system instead of down comer/special pipes.  <b>Upto 05 floors with more than 1000 students :</b>  2 HP (Pump + Electrical Motors connected to main Generator) @ one per each floor connected to normal plumbing system instead of down comer/special pipes and 5 HP (Pump + Petrol Engine) on wheels at Ground floor.</p> <p>For Universities, IIT's, AIIMS, NIT having big campuses, two 150 Kg ABC Powder trolley mounted should be provided. They may be stationed at lab facilities where fire load is high. This can handle Chemical, Electrical Fires.</p> <p>We prescribed <b>2HP plunger pumps</b> as they can <b>generate upto 40 Kg/Cm<sup>2</sup> water pressure where as NBC recommends only 4Kg/Cm<sup>2</sup> water pressure</b> if their suction pipe is connected to any water source such as sump, overhead tank, any water tank or even dropped in a water drum. These pumps can generate "mist" which is highly effective in controlling fires. These pumps work on either Electrical Motors or Fuel Motors. They are light weight and can be fitted with Wheels to make them "mobile". We advise the builders to provide water tapping points at two places on each floor preferably close to each Staircase.</p>	

	<p style="text-align: center;"><b>Fire Fighting Equipment</b></p>	<p>We need these pumps to function even in case of power failure. Hence, we advise that in case of using Electrical Motor driven pumps, let them be connected to main generator. Also, use some fuel Motor driven pumps for better reliability.</p> <p>However, the Architects are advised to use higher capacity pumps ( upto 16 HP Plunger Pumps or Fire Engine Pumps that are available in the market with ISI markings) depending on the expected fireload in each floor. They may have new plumbing system if required to support high capacity pumps. In addition, the Architects are encouraged to use any new technology systems that can reliably generate water pressure of 10 Kg/Cm<sup>2</sup> as and when fire breaks out.</p> <p>Also, in case of upto 5 floors buildings with more than 1000 Students, we prescribed an additional 5 Hp pump as this can generate upto 60 Kg/Cm<sup>2</sup> water pressure which can reach even top floor from ground Sump. This is an additional reliability measure to ensure safety in such a big school/College campuses.</p> <p>We prescribed about 30 meters delivery plastic pipe connected to all the above pumps so that all floors in a building can covered with multiple pumps as 30 meters delivery pipe can be carried through Staircase to all floors even from ground floors without moving the pumps. This improves resiliency or margin of safety of the installed Fire Safety Equipment.</p>	
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5.	<b>Fire Fighting Equipment</b>	<p><b>e) If any building higher than 05 Floors and upto 10 floors:</b></p> <p><b>(i)</b> 02 HP (Pump + Electrical Motors connected to main Generator or Fuel Motor) @ one per floor connected to normal plumbing system instead of down comer or wet-riser.</p> <p><b>(ii)</b> 16 HP (Pump + Petrol Engine) on wheels at Ground floor sump.</p> <p><b>(iii)</b> 02 Nos. of Trolley Mounted ABC 150 Kg Fire Extinguishers to be provided.</p> <p>In addition to what has been mandated in small Educational Institutions, we have enhanced Electrical fire fighting ability by prescribing 150 Kg trolley mounted ABC powder Cylinders. There are mobile, maintenance free and are effective against Electrical fires besides being cost effective. They may be kept at floors having Electrical intensive Equipment.</p> <p>Finally, 16 HP Plunger Pumps are suggested for High Rise buildings at ground Sump as they can generate up to 120 Kg/ Cm<sup>2</sup> water pressure and the water jet can cover upto 10 floors height of the building easily. These pumps are also effective in generating mist and are easy to operate. However, Architects can install any advanced technology that can be similarly effective in High Rise buildings keeping in view of the above principles.</p>	
6.	<b>Fire Fighting Equipment</b>	<p><b>Auditorium Safety:</b></p> <p>Multiple exits and Fire Extinguishers are essential. If underground parking is provided then temperature sensors connected to hooter and also that can give alerts via cell phone to security persons and Management is prescribed. As this system can reliably alert the required security staff and others, to act as per Standard Operating procedure in case of Fire outbreaks.</p> <p>However, management may choose to install reliable automatic fire alarm systems and automatic sprinkler system (The Sprinklers shall be connected to CPVC pipe as per clause 11.8.2 of 15:15105:2021 and pipeline connected to overhead tank) in basement, but not compulsory.</p>	

7.	<b>Fire Fighting Equipment</b>	<p><b>Library &amp; Laboratory Safety:</b></p> <ul style="list-style-type: none"> <li>- 4.5 kg CO<sub>2</sub> Fire Extinguishers @ one per 100 sqmtr.</li> <li>- 5 HP (Pump + Electrical Motors powdered by main Generator) connected to normal plumbing system.</li> <li>- PESO guidelines/Norms to be followed in case of any explosive, chemical material storage facilities or where ever applicable.</li> </ul> <p>However, Data Centers, High Tech labs and any important record rooms etc., are recommended to be fitted with automatic Aerosol/CO<sub>2</sub>/N<sub>2</sub>/Neutral Gas Flooding Systems for better safety.</p>	
8.	<b>Fire Fighting Equipment</b>	<p><b>Kitchens Safety:</b></p> <ol style="list-style-type: none"> <li>1) Kitchen should be away from class rooms, dormitories and labs. Preferably in separate building.</li> <li>2) The Kitchen shall be separated from other parts of the same building by 60 min fire rated wall and 60 min fire resistance doors.</li> <li>3) However, no kitchen shall be allowed in the same multi-storey building having classrooms or dormitories in upper floors. <b>No "Conditional NOC" shall be given under any circumstances as this will compromise basic safety of students.</b></li> <li>4) One 5HP Plunger Pump, two 4.5 Kg CO<sub>2</sub> Fire Extinguishers, Gas Detection and Alarm System shall be installed. They shall be kept in good working condition.</li> <li>5) LPG Cylinders shall be located outside the kitchen with proper ventilation and protection from Rain and Sunlight.</li> <li>6) Five Ways of putting up LPG Cylinder Fires (Pictorial / Cartoon) shall be displayed in the kitchen.</li> </ol>	

9.	<b>Mixed Occupancies</b>	<p>It is strictly not permitted to have Educational Institutions including coaching centers in buildings having shops of highly inflammable substances such as cloths/garments/textiles/gases/dangerous explosive chemicals etc., in the adjoining/above/below the classroom or dormitories. This is to prevent fire accidents happening in those shops not to have serious adverse impact on student's safety.</p> <p><b>No "Conditional NOC" or "Renewal NOC" shall be issued in the above cases of Mixed Occupancy under any circumstances as this will compromise basic safety of students.</b></p> <p>While observing the above, "No Objection Certificate" be issued to any Educational Institution in mixed occupancy building taking into account fulfillment of above prescribed requirements including two exists without insisting on the whole building to have "No Objection Certificate" to avoid practical problems arising out of multiple owners.</p>	
10.	<b>Kindergarten</b>	Kindergarten Class Rooms Shall be located on Ground Floor preferably.	
11.	<b>Height restriction</b>	The Maximum height of the educational building should not exceed total 10 floors.	
12.	<b>Structural Safety</b>	All Educational buildings shall preferably be "A" class construction with brick/stone masonry walls with Reinforced Cement Concrete (RCC) roofing. Where it is not possible to provide RCC roofing, only non-combustible fire proof heat resistance materials should be used.	
13.		<p><b>Display the Following No's at important places</b></p> <p>(i) Fire Department Number (101).  (ii) Ambulance (108).  (iii) Police (100).</p>	
14.	<b>The above to be certified by an authorized Civil Engineer.</b>		

**7) Means of Escape:**

Providing suitable means of Escape to evacuate the students in case of fire outbreak is essential to save lives of people. In many prominent fire accidents such as Kumbakonam school fire, Surat Coaching Center fire, many students lost their lives due to absence of second staircase for escaping as the only staircase engulfed in fire. Therefore, the guiding principle is to provide at least two good ways of Exit or Evacuation in all Educational buildings. The building architects to provide for appropriate means of escape depending on the number of Occupants on each floor Choosing among the following options:

- (i) Two Staircases widely separated from each other.
- (ii) One Staircase and a ramp widely separated from each other.
- (iii) One Staircase and fenced pathway to adjacent buildings on all floors suitable for Evacuation of Occupants.
- (iv) One Staircase and a tube lift (transparent fire proof lift fitted outside the building) with an Exhaust fan on top (to remove smoke from the lift if any) powered by main generator.
- (v) ***Spiral staircases are not allowed under any circumstances as they are not suitable for mass evacuation in panic situations.***
- (vi) All exists are marked clearly and that there are no objects obstructing the Entry and Exit of all Educational buildings.

As this kind of passive preventive measure is very effective in saving lives, no exemption shall be given for providing two good ways of exit. ***No “Conditional NOC” be issued pending provision of two ways of exit under any circumstances as this will jeopardize basic essential Occupant safety.***

**8) Mock Drills:**

All Educational Institutes must prepare an emergency response plan that delineates staff responsibilities, communication modes, and training and updating procedures for all members of the faculty, staff and students.

- a) Every Year mock drills to be conducted and all the staff, Some parents, Students and Management should sign a document certifying the following and keep in record.

We observe that it is the staff, Students and their attenders who lose lives in case of any major fire accident in Educational Institutions. Very rarely owners of buildings are affected. Therefore, ***we intend to put power in the hands of most affected people*** by mandating that the signatures of all participants in Mock Drill to be taken in the register for inspection. These "Mock drills" familiarize all concerned people about the status of safety in their workplace. Though, Mock drill is prescribed at least once a year, we urge the managements to have them frequently in the interest of safety particularly during summer months.

**Proforma enclosed:**

S.No.	Name of the Students/Staff	Remarks/ Observations	Signature
1.			
2.			
3.			

Certifying that all Pumps and other fire fighting equipment are in working condition and the Fire Extinguishers are not outdated.

- b) That all students and staff know Exits and Assembly points and what to do in Emergency.
- c) The Mock drill records to be submitted during any inspection.

Endeavour to be made to use the various pumps on daily basis involving students for upkeep of buildings and campus, so that, people can readily deploy them during fire emergencies which normally induce panic. Also, regular use will keep all the equipment in good working condition.



**9) Inspections & Fire Safety Audit:**

There are about 180 fire stations in the State. The Station Fire Officer (SFO) has to be available to respond to Emergency “fire and rescue” calls 365 days and 24x7. In addition, there are 40,000 Schools/Colleges besides many industrial and business establishments where fire safety inspections for different purposes have to be carried out. It is administratively not practical to get all inspections done through the Fire department officials.

Moreover, many SFO’s have just intermediate qualification and hence SFO’s with such qualifications are “not competent” to inspect technical aspects of Electrical Safety or fire Safety Equipment.

Therefore, the following technically competent people employed with State Government (so that they can be made accountable for accuracy of their reports) are authorized in accordance with powers conferred on Director General for inspection purposes.

- a) All Electrical Engineers Employed with State Government or its undertakings or any State University are authorized to inspect and issue certificate for Electrical Safety after satisfying about the compliance with “Electrical Safety Checklist” (Clause 5).
- b) All Civil Engineers Employed with State Government or its undertakings or any State University are authorized to inspect and issue Certificate of compliance with proper working of installed Fire safety Equipment, plumbing, water availability and suitable Exits as prescribed in (Clauses 6 and 7).
- c) For conducting “General Fire Safety Audits” from time to time, as per guidelines prescribed in this notification, the District Collector or District Educational Officer is authorized to constitute teams of Electrical Engineers and Civil Engineers.

***District Collector to ensure “Fire Safety Audit” is conducted at least once in two years with authorized Electrical [9(a)] and Civil Engineers [9(b)] as mandated by Supreme Court vide Judgment in Kumbakonam School fire case.***



- d) Is there any inspection required for issuing Provisional “No Objection Certificate”?

No inspection is necessary as per G.O Ms. 120, Home (Prisons & Fire) Department, Dated. 25-10-2021.

- e) Who can carryout inspection for issuing Occupancy “No Objection Certificate”?

The application for Occupancy “No Objection Certificate” should have Fire Audit Certificates of Electrical Engineer and Civil Engineer as authorized in 10(a) & 10(b).

If further inspection is necessary, the Director General of Fire Services can nominate “Non Jurisdictional” Fire Officer of Station Fire Officer & above rank to carryout inspection as per G.O Ms.120, Home (Prisons & Fire) Department, Dated: 25.10.2021. The guiding principle is to do away with monopoly of jurisdiction officers in conducting all inspections to improve transparency.

- f) Can Jurisdictional Officers carryout Inspections?

The Government has issued G.O Ms. 90, Home (Prisons & Fire) Department Dt. 13-08-2021, authorizing to conduct joint inspections along with Education department Officials.

## **10) Renewal of “No Objection Certificate”:**

### **(a) Who doesn’t need Renewal of NOC:**

Educational buildings of less than 6 meters in height ( Ground + first floor only), are exempted from applying and obtaining renewal of NOC as per the provisions of Sec 13(1) of Andhra Pradesh Fire Service Act, 1999.

However, it is important to note that they are not exempt from “Occupancy NOC” for an year. This is to ensure that all essential Passive Safety measures are in place including two exits (clause-7) no co-location of classrooms with shops having highly inflammable substances such as cloths/garments/textiles/gases/ dangerous

explosive chemicals etc; no kitchen in the ground floor of the multistoried building having classrooms/dormitories, and following Electrical Safety Checklist (clause-5).

The above Passive Safety measures are critical in ensuring safety of children given our experience of major fire accidents such as Kumbakonam School Fire (Ground + First floor building), Surat Coaching Center fire etc. Even these minimum critical safety measures may not be followed if we exempt from "Occupancy NOC" and hence the above prescription. This is in accordance with the observations made by the Supreme Court in Kumbakonam case.

**(b) Delegation of Powers:**

Not only that there are 40,000 Schools etc... but the list of such establishments will be growing as the State develops. Hence, the renewal applications will be cumulatively growing leading to huge administrative burden given that there are only about 100 total fire personnel per district (including all ranks and just 5 to 10 officers of SFO rank). They need to be on operational duty 24x7 and 365 days. Hence, the necessity of delegation of powers.

Applications for renewal of "No Objection Certificate" can be submitted to State University Registrar in case of affiliated colleges and university buildings, District Educational Officer or Municipal Commissioners having jurisdiction for all Educational Buildings. In addition, all District Chief Fire Officers can receive renewal applications in case of Government Educational Institutions.

The above officers are here by authorized in accordance with powers conferred on Director General in Sec 13(2) A.P. Fire Services Act, 1999, to renew "No Objection Certificate" after ensuring Fire Audit Certificates of authorized Electrical Engineer and Civil Engineer besides payment of prescribed fee through challan. The applications shall also accompany affidavit signed by management testifying observance of all the above prescribed Prudential Safety norms. All such renewals orders shall be copy marked to District Chief Fire Officer and Director General for proper record.

The applications for renewal can continue to be submitted directly to Director General's Office. This will do away with monopoly powers of any particular office, thereby improving transparency.

**(c) Deemed Approval:**

As mandated under Sec 13(2) A.P. Fire Services Act, 1999, the Director General or any officer authorized by him shall issue "No Objection Certificate" within 60 days of the date of complete application. The date of Challan payment is to be treated as date of application for this purpose following the date of said Fire Audit Certificates. If not issued, the Renewal of "No Objection Certificate" is deemed to have been issued, following the doctrine of legitimate expectations as all criteria have been met.

Therefore, the above delegation of powers goes a long way in "Ease of doing business" in the State while improving administrative convenience and transparency without compromising Safety.

**11) Ambiguities Removal:**

- a) About Set backs & Open spaces and measurement of height of buildings.

See Andhra Pradesh Government Gazette W.No.16 dated: 21-04-2022 regarding the above two issues.

- b) Is it necessary to submit drawings of buildings to apply for "No Objection Certificate"?

There is no requirement to submit detailed plans & drawings of buildings. This will avoid unnecessary issue of safety of such sensitive documents specially if submitted online. Such detailed maps may fall into hands of cross border terrorists etc. Therefore, this requirement is dispensed with. However, the building plans shall be scrutinized by authorised Civil Engineer.

- c) Can fire Department Officials insist on any particular agency to install Fire Safety Equipment?

No, the management have full discretion as to the agencies, manufacturers as long as the equipment installed is either of ISI standards or any International Standards or Industry Recognized Standards.

- d) Are the above prescribed Prudential Fire Safety measures confirm to National building Code (NBC), 2016?

Yes.

NBC, 2016 has no statutory basis and is a set of guidelines to be followed. Moreover, NBC 2016 guidelines provides for authorization of new technologies, methods to remove any hardships or practical difficulties to Director General, Fire Services (clause-5.1,part-II and clause-3.4.2 of part-IV of NBC,2016).

Carefully conducting root cause analysis of major fire accidents of last 15 years in the State and understanding the hardships and practical difficulties in deploying Conventional Centralised Plumbing System (Part-IV, Table 7 of NBC 2016), the Director General has authorized the following technologies and methods after due testing:

- (a) Decentralised Fire Safety System using Plunger Pumps, Fire Engine Pumps etc.
- (b) Aerosol Automatic Extinguishing devices.
- (c) Dry Chemical Powder Modular System.
- (d) CO<sub>2</sub> flooding system.
- (e) N<sub>2</sub> flooding system.
- (f) Clean agent flooding system.
- (g) Installation of automatic heat and temperature sensing devices.

For more details please refer to Andhra Pradesh Government Gazette Notification dated: 18.01.2022.

Therefore, the technologies and methods as notified above are authorized extension of NBC,2016 in Andhra Pradesh State.

In fact, the notification goes beyond NBC 2016 ( Part-IV, Table 7), as NBC doesn't mention about Electrical Safety. However, in our root cause analysis of major fire accidents in the country, we found 90% of accidents are due to Electrical Short Circuits.

Hence, the Director General exercising powers conferred in Sec13(2) of Andhra Pradesh Fire Service Act, 1999 has mandated observance of Electrical safety Checklist in the Educational Institutions across the State.

- e) Does Fire department has any role in determining the strength of School/Educational Institution?

No. Education Department may determine strength though GOs such as G.O Ms. 41 dated:11.05.2006 amended from time to time. AICTE will authorise strength in Engineering Colleges and MCI authorises strength in Medical Colleges etc.

- f) Does the Fire Department should go into aspects of building that is beyond the above said Prudential Fire Safety norms?

No. The State Legislature, in its considered wisdom, has authorised Building Licensing Officials to check about certain aspects of the building including scrutinizing and approving building plans; and Revenue Officials to check about titles of land on which buildings stand etc. Hence, let the respective departments do their mandated duty and let the Fire Department Officials confine to ensuring adherence to the said Prudential Fire Safety norms.

**12) Who doesn't need "No Objection Certificate".**

Ground Floor Educational Buildings with Reinforced Cement Concrete (RCC) roof and multiple exits are hereby exempted from Fire "No Objection Certificate" irrespective of Built up Area/Plot area, as such facilities provide easy escape for its occupants in case of any fire accident.

There are no recorded incidents of fire in such facilities in the State. Therefore, the above exemption is justifiable on the grounds of easing administrative burden and enhancing Citizen Convenience.

However, all such Educational Buildings shall observe “Electrical Safety Checklist” of clause-5, Library & Laboratory safety as per clause-6.7 and Kitchen Safety as per clause-6.8 and conduct mock drills as per clause-8. They have to show “Electrical Safety Audit” certified by any authorized Electrical Engineer and “Mock Drill” register as prescribed in clause-8 to any authorized inspection authority under the law. In essence, there is no exemption from observing Prudential Fire Safety norms.

### **13) Alignment of Interests:**

In case of fire accident, the Educational Institute Owners/management suffer not only property damage but also irreparable reputation damage especially if any student’s life is lost. Obviously, the managements/owner’s interest in ensuring “Fire Safety” is in alignment with fire department objectives, provided the mandated requirements are pragmatic.

In arriving at above pragmatic requirements, we have consulted all stakeholders, analyzed major Educational Building fire accidents across the country, capitalized on the accumulated experience of fire fighting personnel of all ranks in the department, took advantage of modern technologies, methods and tested in presence of following experts.

Sl. No.	Name	Name of the University	Qualification
1.	Prof. K.N. Satyanarayana	IIT, Tirupati	PhD Civil Engineering
2.	Sri. P.C. Ramesh Kumar	R & B Chief Engineer	M.Tech, LLB
3.	Prof. S. Srinivasa Prasad	V.R. Siddartha Engineering College	PhD Mechanical Engineering
4.	Prof. Manas Kumar Pal	VIT – Andhra Pradesh Campus	PhD Mechanical Engineering
5.	Prof. Tarkeshwar Mahto	SRM University	PhD Electrical and Electronics Engineering
6.	Sri. D. Seshi Reddy	KL University	M Tech, EEE

The experts and all stakeholders are satisfied with the prescriptions of this notification as adequate to stop/control fires in the incipient stages given that the professional fire fighters located in about 180 fire stations across the State are ever ready to step in, within minutes, working 24 x 7 and 365 days.

In designing, testing, evaluating and in creatively finding solutions, the invaluable contributions of Sri S. Vara Prasad, Driver Operator, Vizianagaram, Sri J. Ramanaiah, District Chief Fire Officer, Tirupati District, Sri M. Sreenivasa Reddy, District Chief Fire Officer, NTR District and many others are hereby acknowledged and commended.

The above minimum requirements for issue of "No Objection Certificate" are hereby notified to avoid compelling owners to install escalating ladder of equipments and to ensure transparency.

Any violation of the above minimum safety provisions will attract prosecution not only under relevant provisions of A.P. Fire Services Act, 1999 but also under appropriate provisions of Indian Penal Code, particularly if the Passive Safety measures are willfully disregarded as this will compromise basic student's safety.

#### **14) Insurance and Affiliation:**

(a) Fire third party insurance is mandatory for all Educational Institutions having more than 5,000 students under single management in multiple locations. However, Government Educational Institutes are exempt from this provision as the Government is always generous in paying compensation in all cases. This is in accordance with the contents in the Judgment of Supreme Court in Kumbakonam school fire case, which further opined that as all insurance companies will definitely inspect the Educational Institution premises before agreeing to provide insurance cover, which ensures adherence to the highest safety standards by Educational Institutions.

In addition, Courts and Tribunals observe whether management has followed the said Prudential Safety Measures prescribed by Professional Fire Service, while awarding compensation to the victims of fire accidents in Educational Institutions.

(b) As per the directions of Supreme Court in Kumbakonam School fire case, the concerned authorities are to ensure that buildings are safe and secure from every angle and therefore, observe above said Prudential Fire Safety norms before granting recognition or affiliation, and for their continuation.

Therefore, the above notification is hereby issued in larger "Public Interest".

**PRATAP MADIREDDY,**

*Director General,*

*State Disaster Response & Fire Services,*

*A.P., Vijayawada.*

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