



Fire & Emergency Services and S.D.R.F
Headquarter, Sector-19 Atal Nagar, Naya Raipur
Government of Chhattisgarh

INSPECTION REPORT

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1. Name & Address of the building	SHRI RAMKRISHNA PUBLIC SCHOOL, KAWARDHA	
Address: District : SHRI RAMKRISHNA PUBLIC SCHOOL, BILASPUR ROAD, SINGHANPURI, KAWARDHA, DIST. - KABIRDHAM(C.G.)491995		
2. Type of Occupancy	Educational Buildings	
3. Building Risk Category	High Risk	
	Moderate Risk	✓
	Low Risk	
4. Details of previous Fire NOC	Apply for New NOC	
5. Fire Safety Directive Letters No.	CGTPA03	
6. Date of Inspection	12/03/2026	
7. Name of Inspecting Agency	M/s Emergency Fire Protection System	
8. Building Height (In 'm')	9 Meter	
9. Total Area of Building (Plot Area) (In sq. m)	1597.93229 Sq meters	
	Built-Up Area	G+2 (17200) Sq feet) During the audit, it was noted that Shri Ramkrishna Public School has two buildings. One is a G+2 (Ground plus two floors) structure with a built-up area of 12,000 square feet, and the other building has a built-up area of 5,200 square feet.
	Floor Area (consider Total Floors)	Ground floor 17200 Sq feet
9. No. of Floor (Include basement if any)	1 st Floor (17200 Sq feet)	
	2 ND Floor (17200 Sq feet)	
	Total 51600 sq. feet	
	SHRI RAMKRISHNA PUBLIC SCHOOL, BILASPUR ROAD, SINGHANPURI, KAWARDHA, DIST. - KABIRDHAM(C.G.)491995	
10. Name and Designation of Auditor	RAJU SAHU	



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11. Occupier of building or if any, representing the owner		SHRI RAMKRISHNA PUBLIC SCHOOL		
Sr. No.	Minimum standards for Fire Prevention and Fire Safety	Requirement as per NBC-2016	Provided at Site	Remarks
1.	Access to Building			
	* Road Width	Every building must have an all-weather motorable access road . Minimum width: 6 m for Institutional buildings and small buildings; 9 m or more for high-rise/large complexes. Road must be free of obstructions, with turning radius suitable for fire tenders.	NBC 2016 Part 4 – Road Width Requirements Institutional Low-Rise (like G+2) Minimum internal road width: 6 m Adequate for fire tender access. Internal road width of 6 m provided at site, as per NBC 2016 Part 4	Access Gates Minimum clear width: 4.5 m for entry/exit gates. Must be designed to allow fire tender passage without obstruction. . Why 6 m is Required Ensures fire tender access to the building. Allows safe maneuvering and turning radius for emergency vehicles. Provides unobstructed passage even if cars are parked along the road edges.
	* Gate Width	Entry/Exit Points At least two access points for large plots/buildings to avoid blockage during emergencies. Gates must be wide enough (minimum 4.5 m) to allow fire tender entry.	Minimum clear gate width: 4.5 meters This ensures that fire tenders and emergency vehicles can enter and exit without obstruction. Gates must align with the internal road width (6 m for low-rise, 9 m for high-rise/large complexes). Gate Width (NBC 2016 Part 4), the entry under “Provided at Site	Access Gates Minimum clear width: 4.5 m for entry/exit gates. Must be designed to allow fire tender passage without obstruction. Turning Radius & Gradient Turning radius: minimum 9 m for fire tender access roads. Gradient: should not exceed 1 in 10
	* Width of Internal Road	Requirement: Internal road width → 6.0 m minimum Turning radius → 9 m minimum Dead-end turning circle → 12 m diameter	Internal road width provided as per NBC requirement (minimum 6 m for low-rise l buildings). Yes provided at site	Why These Widths Are Necessary Emergency Access: Fire trucks and ambulances are large vehicles; narrow roads delay response time. Safe Evacuation: Wider roads prevent congestion



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				during mass evacuation. Urban Safety Planning: Standardized widths ensure uniform safety measures across residential, commercial, and industrial Institutional buildings developments. Operational Efficiency: Adequate road width allows firefighting equipment to be deployed effectively without obstruction.
2.	Means of Egress	<p>Staircase Requirements</p> <p>Most G+2 Educational Buildings are low-rise, so high-rise provisions (refuge area, fire lift, pressurization) are not required. Minimum width: 1.0 m (recommended for Educational Building use) Must discharge directly to open space at ground level Tread \geq 250 mm Riser \leq 190 mm , Handrails on both sides (for wide stairs) No any materials storage allowed on stairs</p>	<p>Staircase</p> <p>One staircase provided (adequate for low-rise Educational Building). Staircase clear width measured approximately \geq 1.0 m. Tread depth and riser height are within permissible limits. Handrail provided along staircase. No storage or combustible materials observed within staircase. Staircase discharges directly to open safe area at ground level.</p>	<p>Why is Means of Egress Important?</p> <p>Life Safety: inimum width of exit doors: 1.0 m (single door), 1.5 m (double door). Travel distance to nearest exit: Not more than 30 m (without sprinklers), 45 m (with sprinklers). Number of exits: At least 2 independent exits for every floor. Staircase width: Minimum 1.5 m for mercantile buildings above 15 m height. Basement egress: Separate staircase and smoke-proof enclosures required.</p>
	Minimum No. of Exits	<p>Number of exits: At least 2 independent exits for every floor.</p>	<p>Means of Egress is the backbone of life safety in Educational Building</p> <p>It ensures safe evacuation, legal compliance, accessibility, and effective firefighting operations. During the audit, it was observed that at least two independent exits per floor were required as per NBC 2016 Part IV</p>	<p>It is strongly recommended that at least two independent exits be constructed/provided on every floor in accordance with NBC 2016 Part IV requirements, to ensure safe evacuation during emergencies and to achieve compliance with statutory fire safety norms.</p>



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			for Educational Building . However, these exits were yes provided at site	
A. Number of Staircases	<p>Key Provisions Number of Staircases Every floor must have at least two independent staircases for evacuation. For basements, a separate staircase (enclosed and smoke-proof) is required in addition to the main staircases.</p> <p>Width of Staircases Minimum 1.5 m for Institutional buildings above 15 m height.</p> <p>Location Staircases must be remote from each other to provide alternative escape routes.</p> <p>Basement Egress At least one staircase must directly connect the basement to the ground level. Staircases serving basements must be enclosed in smoke-proof lobbies.</p> <p>Travel Distance Maximum travel distance to reach a staircase: 30 m (without sprinklers) 45 m (with sprinklers)</p>	“During the audit, it was observed that the required provision has been provided at the site in accordance with the requirements.” as per NBC 2016 Part IV	Recommendation “‘It is recommended to provide at least two independent staircases on every floor, along with a separate enclosed staircase for the , in compliance with NBC 2016 Part IV. This will ensure safe evacuation during emergencies and meet statutory fire safety requirements	
* Upper Floors	<p>As per NBC 2016 part 4 Number of Exits At least two independent exits per floor. Exits must be remote from each other to provide alternative escape routes.</p>	During the audit, it was observed that the required provision has been provided at the site in accordance with the requirements.” as per NBC 2016 Part IV	It is recommended to provide at least two independent exits and two staircases on all upper floors, with proper width and travel distance compliance, as per NBC 2016 Part IV. Emergency signage and lighting must also be installed to ensure safe evacuation	



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* Basements	Educational Building Minimum Staircase Widths: Buildings ≤ 15 m Less than height → 1.2 m Buildings > 15 m Less than height (e.g., G+2 + Basement) → 1.5 m	“It was observed during the site visit that no basement has been provided.”	It is recommended to maintain the provision in good working condition through regular inspection and maintenance, to ensure continued compliance with NBC 2016 Part IV and effective fire safety.
B. Width of Staircases	Minimum Staircase Widths: Buildings ≤ 15 m Less than height → 1.2 m Buildings > 15 m Less than height (e.g., G+2 + Basement) → 1.5 m	During the audit, it was observed that the required provision has been provided at the site in accordance with the requirements.” as per NBC 2016 Part IV	It is recommended to maintain this provision in good working condition through regular inspection, testing, and maintenance, to ensure continued compliance with NBC 2016 Part IV and effective fire safety during emergencies.
* Upper Floors	Minimum Staircase Widths: Buildings ≤ 15 m Less than height → 1.2 m Buildings > 15 m Less than height (e.g., G+2 + Basement) → 1.5 m	During the audit, it was observed that the required provision has been provided at the site in accordance with the requirements.” as per NBC 2016 Part IV	As per NBC 2016 Part IV, a minimum of two independent staircases are required on each floor of Institutional buildings, along with a separate smoke-proof staircase for the basement. During the audit, it was observed that this provision was not provided at site, indicating non-compliance with the code
* Basements	Minimum 2 numbers of separate exit required As per NBC 2016 part 4 Basement Staircases: Must be separate, enclosed, and smoke-proof. Width requirement same as above (depending on building height). Exit Doors: Minimum width 1.0 m (single), 1.5 m (double). Corridors: Minimum width 1.5 m for Institutional buildings occupancy.	“It was observed during the site visit that no basement has been provided.”	It is recommended to provide staircases of minimum 1.5 m width for G+2 Educations Building , with separate smoke-proof basement staircases, in compliance with NBC 2016 Part IV. This ensures safe evacuation and statutory compliance.
C. Protection of exits			
* Fire check door	NBC 2016 Requirement – Fire Check Doors Basement Staircases	Fire Check Doors are required in a G+2 Educational Building	NFPA 101 (Life Safety Code) As per NBC 2016 part



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	<p>Must pass through smoke-proof lobbies. These lobbies must be fitted with fire check doors of minimum 2-hour fire resistance rating.</p> <p>Upper Floors Staircases and corridors must be separated by fire check doors to prevent fire and smoke spread. Doors must be self-closing and outward opening.</p> <p>Certification Fire check doors must comply with IS:3614 (Part II) standards.</p>	<p>with a basement under NBC 2016 Part IV (Fire & Life Safety). But not providede at site</p>	<p>4Why Fire Check Doors Are Important (NBC 2016 Part 4)</p> <p>Fire check doors prevent fire and smoke from spreading between different parts of the building.</p> <p>Safe Evacuation: They protect staircases and corridors, ensuring occupants can escape safely.</p> <p>Mandatory in Certain Buildings: NBC 2016 requires fire-rated doors in staircase enclosures, lift lobbies, and corridors of multi-storey or high-rise buildings.</p> <p>Rating: Typically, fire check doors must have a minimum 2-hour fire resistance rating.</p>
<p>* Pressurization</p>	<p>All high-rise buildings (above 15 m height) must have pressurized staircases.</p> <p>Basements require pressurization of escape routes and lobbies.</p> <p>Purpose Prevent smoke infiltration into staircases and lobbies. Maintain safe evacuation paths during fire.</p> <p>Design Requirements Pressurization systems must maintain positive air pressure in staircases and lobbies.</p> <p>Typical pressure differential: ≥ 50 Pa</p>	<p>Yes — Pressurization of staircases and escape routes is required in a G+2 Educational Building with a basement under NBC 2016 Part IV, because the building height exceeds 15 m and it includes a basement.</p> <p>Pressurization ensures staircases remain smoke-free during fire emergencies During Audit not provided at site</p>	<p>Why it matters</p> <p>Prevents falls or collapse of exit routes.</p> <p>Prevents smoke and fire from spreading in stairwells.</p> <p>Provides the necessary time for safe evacuation and firefighter arrival.</p>



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		<p>between staircase and adjacent areas.</p> <p>Air supply fans must be connected to emergency power.</p> <p>Locations Where Required Staircase shafts serving upper floors. Basement smoke-proof lobbies.</p>		
	<p>D. No. of continuous staircases to terrace</p>	<p>NBC 2016 – Continuous Staircase Requirement Key Points Number of Staircases: Minimum two independent staircases are required for Institutional buildings above 15 m height. Continuous to Terrace: Out of these, at least one staircase must extend continuously up to the terrace. This is essential for fire-fighting access and safe evacuation. Basement Connection: Staircases serving basements must be enclosed in smoke-proof lobbies and fitted with fire check doors. Width Requirement: 1.5 m minimum width for staircases in mercantile buildings above 15 m height (like G+3 + Basement).</p>	<p>For a G+2 Educational Building, the National Building Code of India 2016 Part IV (Fire & Life Safety) requires that at least one staircase must be continuous up to the terrace. During audit provided at site</p>	<p>Why Continuous Staircase to Terrace is Mandatory Fire-fighting Access Firefighters need direct access to the terrace for deploying hoses, equipment, and rescue operations. A continuous staircase ensures they can reach the roof without obstruction. Safe Evacuation In case lower floors are blocked by fire or smoke, occupants can move upward to the terrace as a safe refuge area until rescue arrives. The terrace acts as an assembly point for evacuation by ladders or aerial platforms. Redundancy & Reliability NBC mandates two independent staircases in Educational Building above 15 m height. Out of these, one must be continuous to the terrace to guarantee at least one escape route remains usable in all scenarios. Integration with Other Systems Continuous staircases are usually pressurized to remain smoke-free. They are enclosed with fire-resistant walls and fire check doors to prevent fire</p>



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				spread..
E. Staircase Lobby	<p>Fire resistance 1 hours (walls, doors)</p> <p>Reason: NBC 2016 Requirement: Staircase lobbies (enclosed spaces with fire check doors before entering staircases) are mandatory in high-rise buildings (above 15 m) to prevent smoke from entering staircases.</p>	<p>Educational Buildings Any height BUILDINGS Enclosed staircase with fire doors required as per NBC 2016 Part 4 for G+2 Institutional buildings During Audit not provided at site</p>	<p>Why Staircase Lobbies Are Required Smoke Containment Staircases are the primary evacuation routes. A smoke-proof lobby acts as a buffer zone between the fire-affected area and the staircase, preventing smoke from entering the escape route.</p> <p>Safe Refuge Space Occupants can gather in the lobby before moving into the staircase.</p> <p>This reduces panic and congestion during evacuation.</p> <p>Basement Safety Basements are high-risk zones for fire and smoke accumulation. NBC mandates that staircases serving basements must pass through smoke-proof lobbies fitted with fire check doors.</p> <p>Fire-Fighting Access Lobbies provide controlled access points for firefighters to enter staircases and move between floors safely.</p> <p>Code Compliance NBC 2016 Part IV clearly states: High-rise Educational Buildings (>15 m height) must have enclosed staircases with smoke-proof lobbies. Basement staircases must always be separated by smoke-proof lobbies with fire check doors (minimum 2-hour rating).</p>	
F. Width of Corridor	NBC 2016 Corridor Width Requirements		Key Provisions	Minimum Width of



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	<p>Educational Building Low-rise (≤15 m, e.g., G+3): Element Corridor width Basement corridors Exit doors</p> <p>NBC 2016 Requirement Minimum 1.5 m Smoke-proof + fire check doors 1.0 m (single), 1.5 m (double)</p> <p>Purpose Safe evacuation Prevent smoke spread Smooth flow to corridor</p>	<p>As per NBC 2016 Part IV, Educational Buildings must have corridors of minimum 1.5 m width to ensure safe evacuation.</p> <p>During the audit, it was observed that this provision was not provided at site, indicating non-compliance with the code.”</p>	<p>Corridors: For Educational Building occupancy, the minimum corridor width is 1.5 m.</p> <p>Purpose: To allow smooth evacuation during emergencies. To prevent congestion and ensure safe movement of occupants.</p> <p>Relation to Exits: Corridors act as connecting paths to staircases and exits. Their width must match the capacity of staircases and exit doors.</p> <p>Basement Corridors: Must be wider and smoke-proof, with fire check doors at junctions.</p>
G. Door Size	<p>As per NBC 2016 Part IV, Educational Building must have exit doors of minimum 1.0 m width (single) or 1.5 m width (double), with a minimum height of 2.0 m. During the audit, it was observed that the required door sizes were not provided at site, indicating non-compliance with the code</p>	<p>Yes, door size is required — minimum 1.0 m (single) or 1.5 m (double) width, 2.0 m height — and basement doors must be fire check doors with 2-hour rating.</p>	<p>Key Provisions Exit Doors (Main & Emergency Exits) Minimum width: 1.0 m for single-leaf exit doors. 1.5 m for double-leaf exit doors.</p> <p>Minimum height: 2.0 m. Doors must open outward (in the direction of travel to exit). Doors must be swing type (sliding doors are not permitted for exits).</p> <p>Basement Doors Must be fitted with fire check doors (minimum 2-hour fire resistance). Width requirement same as above (depending on occupancy load). Internal Doors (corridors, rooms) Width depends on occupant load, but generally not less than</p>



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				0.9 m. Doors leading to staircases must comply with exit door requirements.
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3.	Compartmentation			
	* Fire check door	<p>NBC 2016 Requirement – Fire Check Doors Basement Staircases Must pass through smoke-proof lobbies. These lobbies must be fitted with fire check doors of minimum 2-hour fire resistance rating. Upper Floors Staircases and corridors must be separated by fire check doors to prevent fire and smoke spread. Doors must be self-closing and outward opening. Certification Fire check doors must comply with IS:3614 (Part II) standards.</p>	<p>According to NBC 2016 Part 4, fire Fire Check Doors are required in a G+2 Educational Building under NBC 2016 Part IV (Fire & Life Safety). But not provided at site</p>	<p>Why Fire Check Doors Are Important (NBC 2016 Part 4) Fire check doors prevent fire and smoke from spreading between different parts of the building. Safe Evacuation: They protect staircases and corridors, ensuring occupants can escape safely. Mandatory in Certain Buildings: NBC 2016 requires fire-rated doors in staircase enclosures, lift lobbies, and corridors of multi-storey or high-rise buildings. Rating: Typically, fire check doors must have a minimum 2-hour fire resistance rating.</p>
	* Sealing of electrical shafts	<p>Yes, sealing of electrical shafts is mandatory in your G+3 + Basement Educational Building as per NBC 2016 Part IV. Code Compliance NBC 2016 Part IV clearly states that all vertical shafts (electrical, plumbing, HVAC, lift) must be enclosed and sealed to prevent fire/smoke spread. Fire resistance rating: minimum 2 hours.</p>	<p>As per NBC 2016 Part IV, electrical shafts must be sealed at each floor with fire-resistant construction to prevent vertical fire and smoke spread. During the audit, it was observed that electrical shafts were not sealed, indicating non-compliance with the code</p>	<p>Why Electrical Shaft Sealing is Mandatory Prevent Fire Spread Electrical shafts run vertically through multiple floors. If left unsealed, fire and smoke can travel rapidly through the shaft, endangering all levels. Compartmentation NBC requires shafts to be enclosed with fire-resistant walls and sealed at every floor level. This ensures each floor remains a separate fire compartment. Basement Risk Basements are high-risk</p>



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			zones for electrical fires. Shafts must be sealed with fire-resistant materials and fitted with fire check doors where access is needed.
* Fire Rating of shaft door	Yes, shaft doors are required to be fire-rated minimum 2 hours — in your G+2 Educational Building	Electrical shafts: Doors must be fire-rated and often fitted with smoke seals. Lift shafts: Protected by fire-rated doors at each landing, usually 2-hour rating. Service shafts (plumbing/HVAC): Doors must match the shaft wall's fire rating (generally 2 hours) During Audit Not Provided at site	Why It's Not Required NBC 2016 Requirement: Fire-rated shaft doors (usually 2-hour fire resistance) are mandatory in high-rise buildings (>15 m) where vertical shafts (electrical, service, or utility shafts) can allow fire and smoke to spread between multiple floors.
* Size of compartment	Yes NBC 2016 Part IV requires compartmentation in Educational Building like your G+2 + Basement structure. The maximum size of a fire compartment is limited to control fire spread, and for mercantile occupancy the floor area of a single compartment must not exceed 750 m ² . Larger floor plates must be subdivided with fire-resistant walls.	As per NBC 2016 Part IV, Educational Building must be subdivided into fire compartments not exceeding 750 m ² per floor, and basements not exceeding 500 m ² . During the audit, it was observed that complementation was not provided, indicating non-compliance with the code	It is recommended to subdivide the building into fire compartments of maximum 750 m ² (upper floors) and 500 m ² (basement), using fire-resistant walls of minimum 2-hour rating, in accordance with NBC 2016 Part IV. This will ensure containment of fire, safe evacuation, and statutory compliance
* Fire Dampers	For a G+2 Educational Building , the National Building Code of India 2016 Part IV (Fire & Life Safety) requires fire dampers in HVAC and ventilation systems.	As per NBC 2016 Part IV, fire dampers of minimum 2-hour rating must be installed in HVAC ducts, basement ventilation, and vertical shafts. During the audit, it was observed that fire dampers were not provided, indicating non-compliance with the	Fire Dampers – NBC 2016 Requirements Purpose Fire dampers are installed in ducts and shafts to prevent fire and smoke spread through HVAC systems. They automatically close when exposed to high temperatures. Where Required



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			code	<p>At duct entry/exit points where ducts pass through fire-rated walls or floors. At basement ventilation ducts (high-risk zone).</p> <p>At vertical shafts carrying air between floors.</p> <p>At AHU rooms and mechanical floors.</p> <p>Fire Resistance Rating Fire dampers must have a minimum 2-hour fire resistance rating. Must comply with IS standards and be tested/certified.</p> <p>Integration Fire dampers must be linked with the fire detection and alarm system for automatic activation.</p> <p>Manual override should also be available for fire-fighting personnel.</p>
4.	Smoke Management System			
	* Basements	For a G+2 Educational Building , the National Building Code of India 2016 Part IV (Fire & Life Safety) makes smoke management systems mandatory , especially because the building height exceeds 15 m and it includes a basement.	Mechanical Ventilation Basements and large enclosed spaces require mechanical smoke extraction systems. Fans and ducts remove smoke and maintain visibility for evacuation. Basement During audit not provided at site	Why It's Not Required NBC 2016 Requirement: Smoke management systems (like pressurization of staircases, smoke extraction fans, or mechanical ventilation) are mandatory in high-rise buildings (>15 m), especially in staircases, lift lobbies, basements, and large assembly occupancies.
	* Upper Floors	Pressurization of Staircases & Lobbies Staircases and smoke lobbies must be pressurized to prevent smoke infiltration. Positive	Mechanical Ventilation Basements and large enclosed spaces require mechanical smoke extraction systems. Fans and ducts remove smoke and maintain visibility for evacuation.	Emergency Power Supply All smoke management systems must be connected to backup power to



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		pressure ensures that smoke does not enter escape routes. Natural Ventilation Openings, windows, or vents can be used in smaller buildings. Often combined with mechanical systems in larger structures.	Basement not build up in this building During audit not provided at site	function during outages.
5.	Fire Extinguishers *(As per Latest IS: 15683 & IS: 2190)			
	* Total Numbers	For a G+3 Educational Building with a basement, the provision of portable fire extinguishers is mandatory under NBC 2016 Part IV (Fire & Life Safety), and the latest standards IS:15683 (Portable Fire Extinguishers – Construction & Performance) and IS:2190 (Selection, Installation & Maintenance of First-Aid Fire Extinguishers)	At least one per floor (e.g.,4kg DCP per 200 sqm)and considering travel distance,but Stressing.professional assessment for specific designs During audit provided at site Total no.of fire extinguisher 20 nos ABC 6KG 17 Nos CO2 4.5KG 03 Nos TOTAL 20 NOS	It is recommended to install portable fire extinguishers of appropriate type (Water/Foam, CO ₂ , DCP) at all required locations, ensuring coverage of 1 per 200 m ² and minimum 2 per floor, in accordance with NBC 2016 Part IV and IS:15683/IS:2190. Regular inspection and maintenance must be carried out to ensure readiness
	* Types	Type of fire extinguisher requirements depend on building occupancy and fire hazard level requiring specific types (Water,Foam,DCP CO ₂ ,etc.)for Class A B,C,D,&E fires,with guidelines suggesting minimum ratings like 26A for smaller preas and calculation based on floor area,fire load.and travel distance (max 100 ft/ 30m)for larger spaces.	ABC 6KG 17nos CO2 4.5 KG 03 nos TOTAL 20NOS Total numbers of fire extinguishers 20 nos at the buildings	It is recommended to install portable fire extinguishers of appropriate type (Water/Foam, CO ₂ , DCP) at all required locations, ensuring coverage of 1 per 200 m ² and minimum 2 per floor, in
	* Refilling Date & HPT due date	As per IS 2190;2024 Mechanical Foam type-Every 2 year,ABC type -Every3 year ,Carbon Dioxide type-Every 3	During the audit, it was found that all the fire extinguishers in the have their refill and hydro static pressure test (HPT) valid	Requesting to facility owner portable fire extinguisher should be inspection(Monthly&



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	to 5 year and all fire extinguisher must be refilling immediately after use. Every year all fire extinguisher should be inspect with authorized person.	until 05/01/ 2026 and due date 04/01/2027 This indicates that the extinguishers are currently in serviceable condition and compliant with IS:15683 and IS:2190 requirements	Annual),refilling and Hydro test as per the schedule. Also keep inspection,refilling and Hydro test report properly.
* Time period of next refill (I.e. From refilling date to next date of refill, as per IS: 2190:2024)	As per IS 2190:2024 Mechanical Foam type- Every 2 year, ABC type -Every 3 year ,Carbon Dioxide type-Every 3 to 5 year and all fire extinguisher must be refilling immediately after use. Every year all fire extinguisher should be inspect with authorized person.	During the audit, it was found that all the fire extinguishers in the have their refill and hydro static pressure test (HPT) valid until 2028. next due date 05/01/2026 and due date 04/01/2027 This indicates that the extinguishers are currently in serviceable condition and compliant with IS:15683 and IS:2190 requirements	Record the validity date: Note 2027 in your compliance log so it's easy to track. Plan ahead: Schedule reminders for February 2027 to arrange refills and HPT tests before expiry. Cross-check inventory: Ensure every extinguisher is tagged and logged with its location, type, and next due date.
* IS marking	As per IS 2190:2024 Mandatory BIS-certified mark (IS 15683/IS 2190) is required on all fire extinguishers. Label Information, Maintenance Tags Installation Marking and Color Coding MFG - Date	During the audit, it was found that all the fire extinguishers in the have their refill and hydro static pressure test (HPT) valid until 2028. This indicates that the extinguishers are currently in serviceable condition and compliant with IS:15683 and IS:2190 requirements	Monthly checks: Gauge in green, pin intact, no damage. Annual servicing: Mandatory professional inspection. Replacement triggers: Failed HPT, corrosion, leakage, damaged nozzle/hose.
6.	First-Aid Hose Reels Yes, First-Aid Hose Reels are mandatory in your G+2 + Educational Building under NBC 2016 Part IV..	Standard Reference: Hose reels must conform to IS 884 – Specification for First-Aid Hose Reels for Fire Fighting. Installation: Provided in buildings as part of the internal fire protection system. Located near exits, corridors, or strategic points to allow quick access. Mounted so that the hose can be easily run out in the direction of the fire. Design & Construction: Hose reels must be permanently connected to a pressurized water supply. Equipped with a control	The center of the hose reel drum should be installed at a height of approximately 1.5 m above the floor level. This ensures that the reel is easily reachable for both trained personnel and occupants without obstruction. The operating valve and nozzle should also be positioned at a convenient height, generally between 1.0



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			valve, nozzle, and automatic shut-off arrangement. Hose length typically 30 m (as per IS 884), with diameter suitable for effective firefighting. During audit 09 nos fire hose reel ground floor main entrance provided at site	m and 1.5 m from the floor. Maintenance: Regular inspection and testing to ensure readiness. Must be kept unobstructed and clearly marked.
* Total number of each floor	Standard Reference: Hose reels must conform to IS 884 – Specification for First-Aid Hose Reels for Fire Fighting. Installation: Provided in buildings as part of the internal fire protection system.	During the audit of the G+2 Educational Building g with a basement, it was found that a total of 01 First-Aid Hose Reels (FAHRs) have been provided at site	Ensure hose reels are connected to the wet riser system, fitted inside fire hose cabinets near staircases/exits, with hose length of 30 m and diameter 20 mm, as per IS:884. Routine inspection and maintenance should be carried out to confirm readiness	
* Length of hose reel hose	Hose length typically 30 m (as per IS 884), with diameter suitable for effective firefighting	Hose length typically 30 m (as per IS 884), with diameter suitable for effective firefighting During audit provided at site	Why Hose Length – 30 meters Coverage: A 30 m hose allows coverage of a large radius from the reel, typically enough to reach any point in the floor area where it is installed. Ease of Handling: Longer hoses become heavy and difficult to maneuver; 30 m is considered the maximum practical length for quick deployment by occupants. Standardization: Most codes and product standards (IS 884 in India, NFPA guidelines) specify 30 m as the standard length for first-aid hose reels.	
* Nozzle diameter	Hose reel with discharge nozzle Dia (as per IS 884) of 19 mm is suitable for effective fire fighting	Hose reel with discharge nozzle Dia (as per IS 884) of 19 mm is suitable for effective fire fighting During audit provided at	Why Hose Diameter – 19 mm Water Flow: A 19 mm internal diameter provides sufficient flow	



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		site	(around 30–35 liters per minute at 2–3 bar pressure) to control Class A fires (wood, paper, textiles). Weight & Flexibility: Larger diameters make hoses heavier and harder to handle; 19 mm balances flow rate with ease of use for untrained occupants. Compatibility: Most hose reel nozzles are designed for 19 mm hoses, ensuring standardized fittings and reliable performance.
7.	Automatic Fire Detection and Fire alarm System	G+2 Educational Building installation of an Automatic Fire Detection and Fire Alarm System is mandatory under NBC 2016 and local fire safety bye-laws. This is not optional — it is a legal requirement tied to building approval, occupancy certification, and insurance validity.	Right now your site has a partial fire alarm installation — detectors, MCPs, hooters, and a control panel only on the ground and 1st floor. Since the 2nd, provided with these devices, the system is not compliant and poses a serious safety gap.
	* Type of detectors	Integration with Other Systems Fire alarm must be integrated with public address systems, automatic sprinkler systems, and smoke management systems where applicable. Should trigger automatic actions such as elevator recall, door release, and HVAC shutdown. Maintenance & Testing Regular inspection and functional testing are mandatory.	During audit not provided at site Your current installation is incomplete. For a G+2 Educational Building with a basement, fire alarm devices must be installed on every floor



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	Fire drills: Every 3 months for the first 2 years. Every 6 months thereafter.		
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<p>* Location of Main Panel</p>	<p>Control & Indication Panel Centralized fire alarm panel must be located in a fire control room or another safe, accessible area. Should provide zone-wise indication of fire, fault, and supervisory signals.</p>	<p>During the audit, Having a 4-zone control panel provided at site Ground floor is correct, installation</p>	<p>Why the Main Panel Location Matters The main fire alarm panel is located at the main entrance (or fire control room) because: It ensures quick access for fire services. It allows fast identification of fire zones. It complies with NBC 2016 and NFPA 72 requirements.</p>
<p>* Location of Repeater Panel</p>	<p>Typical Placement: Near the main entrance of the building. In the security room, reception area, or fire control room. At strategic points in large complexes or high-rise buildings where the main panel may not be immediately accessible.</p>	<p>During the audit, fire Repeater Panel were not found on the first floor of all the blocks.</p>	<p>Height of Installation: Control switches and indicators should be mounted at 1.2 m to 1.5 m above floor level for easy operation. Must be connected to the main fire alarm panel and provide zone-wise indication of fire, fault, and supervisory signals.</p>
<p>* Alternate source of power</p>	<p>Diesel Generator (DG) sets are the most common solution. Battery backup systems (UPS/inverters) are used for smaller loads like alarms, lighting, and communication. In high-rise or critical facilities, both DG sets and UPS are combined for redundancy.</p>	<p>It should provide power for a minimum duration (often 2 hours or more, depending on occupancy type). A 62.5 kVA diesel generator is provided as an alternate source of power to ensure continuous operation of fire protection systems</p>	<p>Why It's Important in Fire Safety Context Alternate Power Source: NBC 2016 Part 4 requires critical fire protection systems (fire pumps, alarm panels, emergency lighting, smoke management fans) to have an alternate source of power. DG Set Role: The 125 kVA DG ensures these systems remain operational during a power</p>



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		during main supply failure.	outage caused by fire or grid failure. Capacity Justification: significant backup capacity. A 125 kVA DG can support firefighting systems plus essential building loads (lighting, lifts, etc.).	
* Hooters Location	<p>NBC Guidelines for Fire Alarm Hooters (Audible Alarms) Placement:Hooters (sounders) must be installed so that the alarm is clearly audible throughout the building. They are typically placed in corridors, staircases, lobbies, and large rooms where people gather.</p> <p>Height of Installation: Usually mounted at 2.1 m to 2.4 m above floor level (close to ceiling height) to ensure sound disperses effectively.</p> <p>Distribution:At least one hooter per floor, with additional units as required to cover all zones. In large or noisy areas, more hooters are installed to maintain audibility.</p>	During the audit not provided at site	<p>Key Points About Hooters Function: Produces a loud, continuous or intermittent sound when triggered by the fire alarm panel. Placement: Installed on every floor, especially near staircases, corridors, and large open areas. Integration: Connected to the fire alarm control panel; activates automatically when detectors or manual call points are triggered. Types: Electronic hooters (common in modern systems) Mechanical bells (older installations)</p>	
8	Manually Operated Electrical Fire Alarm System	<p>Manual Operated Electronic Fire Alarm (MOEFA) Mandatory in all buildings requiring fire alarm systems. Call points must be installed at every 30 m interval along exit Routes.Height of installation: 1.2 m to 1.5 m above floor level for accessibility.</p>	<p>NBC 2016 Guidance MOEFA Requirement: NBC 2016 specifies that assembly buildings, educational institutions, offices, and large residential complexes should be equipped with a manually operated electrical fire alarm system. Coverage: Manual call points (MCPs) must be installed at strategic locations such as exits, corridors, and</p>	<p>Why It Is Installed Cost-effective: Cheaper than automatic detection systems. Simplicity: Easy to install and operate. Compliance: NBC 2016 requires MOEFA in certain occupancies (like assembly buildings, schools, offices, and large commercial complexes) where automatic detection may not be mandatory but manual</p>



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			staircases, connected to a central panel with hooters/sounders. During the audit not provided at site	alarm capability is essential. Immediate Alert: Ensures that once someone notices a fire, they can quickly alert everyone in the building. Typical Locations for MCPs Near exits and staircases. At main entrance/lobby. On each floor, at easily accessible points.
9	Public Address System	A Public Address (PA) System is an important part of a fire safety setup in buildings like your G+2 Educational Building with a basement. It works hand-in-hand with the fire alarm system to guide occupants during emergencies.	For your building, a Public Address System is strongly required alongside smoke detectors, MCPs, hooters, and the fire alarm panel. It ensures safe, orderly evacuation and is part of compliance with fire safety standards. During audit not provided at site	NBC 2016 / Fire Code Requirements In Educational Building with basements and multiple floors, a PA system is recommended and often required for effective evacuation. Especially in large open areas (shops, malls, basements), hooters alone may not be enough — voice instructions help control crowd movement. The PA system should be linked to the fire alarm control panel so it activates automatically during fire events.
10	Automatic Sprinkler System			
	* Basements	An Automatic Sprinkler System is a critical fire protection measure, especially in a G+2 Institutional building.	“It was observed during the site visit that no basement has been provided.”	Code & Compliance NBC 2016 (India) requires sprinklers in: Basements (mandatory due to high fire risk and poor ventilation). Educational Building exceeding certain floor area or height thresholds. NFPA 13 (international standard) also mandates sprinklers in Educational



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			Building occupancies and basements.
* Upper Floor	An Automatic Sprinkler System is a critical fire protection measure, especially in a G+2 Institutional building	During the audit, it was observed that automatic fire sprinklers are provided in the Only 2 nd floor of your Institutional building But Ground 1st floor is not installade fire sprinkler Total number of sprinkler 15 nos	Your current sprinkler installation is partially compliant (basement, ground, 1st floor covered), but not sufficient for a G+3 Institutional building Sprinklers must be extended to the 2nd and 3rd floors to meet NBC requirements and ensure full safety
* Sprinkler above false ceiling	An Automatic Sprinkler System is a critical fire protection measure, especially in a G+2 Educational Building.	Typical Scenarios Sprinklers below the false ceiling: Common in offices, malls, and homes. Protects the occupied space directly. Sprinklers above the false ceiling: Required if the void is large enough, contains combustible materials, or has equipment that could catch fire. But not provided at site	Why Sprinklers Above False Ceilings Hidden Fire Risk: Electrical wiring, cable trays, HVAC ducts, and lighting fixtures are usually routed above false ceilings. These can ignite and burn unnoticed. Rapid Smoke Spread: Fire in the ceiling void can spread quickly through ducts and plenum spaces, bypassing detectors in the occupied area. Early Suppression: Sprinklers above the ceiling can control or extinguish a fire before it breaks through into the occupied space. Code Compliance: NBC 2016 and NFPA 13 require sprinklers in concealed spaces if they contain combustible materials or services.
11	Internal Hydrants		
	* Size of riser/down-comer	The size of the riser/down-comer is a critical detail in fire protection	During the audit, size of the The size of the riser/down-comer must



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	systems because it directly affects the water flow and pressure available at hydrants and sprinklers	riser/down-comer was not provided at site.	be documented because it's the basis for proving that the fire water system can actually perform as designed.
* Number of hydrants per floor	An internal hydrant system is one of the most important active fire protection measures in multi-storey Pressurization of Lifts shafts like your G+2 with basement. It complements sprinklers and alarms by giving firefighters immediate access to water inside the building.circumstances	During the audit not provided at site	Why Internal Hydrants For your building type, internal hydrants are required on every floor including the basement. They ensure firefighters can immediately connect hoses and fight fire inside, while sprinklers and alarms handle detection and suppression.
* Hose Box	Typical Contents of Hose Box Hose pipe (usually 15–30 m length) Branch pipe / nozzle Couplings Sometimes a small extinguisher or accessories	During the audit not provided at site	Main Reasons Immediate Firefighting Readiness Hose boxes store hoses, branch pipes, and nozzles right next to hydrant points, so trained staff or fire brigade can start firefighting without delay. Protection of Equipment They keep hoses and accessories safe from dust, moisture, and physical damage, ensuring reliability during emergencies. Compliance with NBC 2016 The National Building Code of India requires hose boxes to be installed adjacent to hydrant points (internal and external). One hose box per hydrant is the standard practice. Accessibility Clearly marked red hose boxes make it easy to



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			locate firefighting equipment quickly, even in panic situations.
12	Yard Hydrants		
	* Total Number of Hydrants	<p>For Your Case (G+2 Educational Building) If the building height is ≥ 15 m \rightarrow Yard hydrants are required.</p> <p>If the building plot area is large or has open parking \rightarrow Yard hydrants are required.</p> <p>If it is a small Educational Building (<15 m height, limited plot) \rightarrow Yard hydrants may not be mandatory, but still recommended for safety.</p>	<p>Yard Hydrant System</p> <p>Not Provided at site.</p> <p>Requirement: Mandatory for Educational Building (G+2 height >15 m).</p> <p>Why Yard Hydrants Are Needed External Firefighting Access: Yard hydrants allow fire brigade to connect hoses outside the building without entering immediately. Coverage for Surroundings: They protect open areas, parking, and external portions of the building.</p> <p>Code Requirement (NBC 2016 / IS 3844): Yard hydrants are mandatory for high-rise buildings (≥ 15 m height) and for Educational Building occupancy with large plot area.</p> <p>They must be spaced so that no point on the building perimeter is more than 45 m from a hydrant.</p> <p>Fire Brigade Connection: Yard hydrants are usually connected to the same fire water tank and pump system as internal hydrants.</p>
	* Hose Box	<p>For Your Case (G+2 + If the building height is ≥ 15 m \rightarrow for yard hydrants are required. hose box</p> <p>If the building plot area is large or has open parking \rightarrow for yard hydrants are required. hose box</p>	<p>Hose Box System</p> <p>Not Provided at site.</p> <p>Requirement: Mandatory for Educational Building (G+2, height >15 m).</p> <p>Main Reasons Immediate Firefighting Readiness Hose boxes store hoses, branch pipes, and nozzles right next to hydrant points, so trained staff or fire brigade can start firefighting without delay.</p>



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		<p>If it is a small Pressurization of Lifts shafts (<15 m height, limited plot) → Hose box may not be mandatory, but still recommended for safety. resort staff until the fire brigade arrives.</p>	<p>Protection of Equipment They keep hoses and accessories safe from dust, moisture, and physical damage, ensuring reliability during emergencies.</p> <p>Compliance with NBC 2016 The National Building Code of India requires hose boxes to be installed adjacent to hydrant points (internal and external). One hose box per hydrant is the standard practice.</p> <p>Accessibility Clearly marked red hose boxes make it easy to locate firefighting equipment quickly, even in panic situations.</p>
13	Pumping Arrangements		
	* Ground Level	<p>If each hydrant requires ~2,850 L/min, system should be designed for at least 2 hydrants operating simultaneously → ≈ 5,700 L/min capacity.</p> <p>Pump arrangement:</p> <p>1 × Electric pump (5,700 L/min @ 3.5–5 kg/cm²).</p> <p>1 × Diesel standby pump (same capacity).</p> <p>1 × Jockey pump (≈ 180–250 L/min).</p>	<p>During audit not Provided at Site</p> <p>Number of pumps: Main Pump (Electric) @ 3.5–5 kg/cm² ~30–25 HP Primary supply to hydrants/sprinklers Standby Pump (Diesel) Same as main ~30–40 Backup in case of power failure Jockey Pump 180 LPM @ 3.5–5 kg/cm² ~15 HP Maintains line pressure, auto-starts on small leaks</p> <p>NBC Requirement For hydrant systems, main fire pump capacity must be 2,850 LPM at 3.5–5 kg/cm² pressure.</p> <p>This is based on two hydrants operating simultaneously (each ~1,425 LPM).</p>
	- Discharge of Main Pump	<p>Main Fire Pump</p> <p>Electric-driven pump sized to deliver required flow and pressure.</p>	<p>During audit not Provided at Site</p> <p>Number of pumps: Main Pump (Electric) 1600 LPM</p> <p>NBC Requirement For hydrant systems, main fire pump capacity must be 2,850 LPM at 3.5–5 kg/cm²</p>



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	<p>Flow rate: Calculated based on hydrant demand (usually 2,850 L/min for one hydrant, or more if multiple hydrants may be used simultaneously).</p> <p>Pressure: Enough to maintain 3.5–5 kg/cm² at the farthest hydrant point.</p>	@ 3.5–5 kg/cm ² ~30–25 HP Primary supply to hydrants/sprinklers	<p>pressure.</p> <p>This is based on two hydrants operating simultaneously (each ~1,425 LPM).</p>
- Head of Main Pump	Main pump should be rated around 60–80 m head (with flow capacity sized for at least 2 hydrants operating simultaneously, ~5,700 L/min).	During audit not Provided at site of main pump Head 60–80 m	These three pumps are in auto mode and maintain a pressure of 7kg
- Number of Main Pumps	Required main fire pump capacity is 2,850 LPM at 3.5–5 kg/cm ² pressure. The existing arrangement is inadequate for hydrant system requirements and needs to be upgraded to meet statutory norms 1 × Electric pump (5,700 L/min @ 3.5–5 kg/cm²).	During the audit Provided At site,	The main fire pump capacity is set at 2,850 LPM because NBC requires the system to support two hydrants operating simultaneously, each at ~1,425 LPM, with adequate pressure for effective firefighting.
- Jockey Pump out put	<p>This is much smaller than the main pump (2,850 LPM), because its role is only to maintain pressure, not to supply firefighting water.</p> <p>You may have one jockey pump alongside the main electric pump and the standby diesel pump. 1 × Jockey pump (≈ 180–250 L/min).</p>	You should have a jockey pump with a main electric pump and a standby diesel pump, 1 × jockey pump (≈ 180–250 L/min). But not provided at your site.	A jockey pump is a small-capacity pump in the fire hydrant system. Its purpose is not to fight fire directly, but to maintain system pressure and compensate for minor leakages so that the main pump doesn't start unnecessarily.



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	<p>- Jockey Pump Head</p>	<p>Head requirement: 60–80 m head (\approx 6–8 bar, or 3.5–5 kg/cm² at hydrant outlet).</p>	<p>During the audit Provided At site, 60-80 head</p>	<p>Reason:</p> <p>The jockey pump must maintain the same pressure level as the main pump so that the system stays pressurized.</p> <p>If the jockey pump head were lower, the system pressure would drop and trigger the main pump unnecessarily.</p>
	<p>- Stand by Pump Head</p>	<p>Standby Pump (Diesel) Same as main~30–40 HP Backup in case of power failure Main pump head: 60–80 m.</p> <p>Standby diesel pump head: — 60–80 m.</p> <p>Flow capacity: 2,850 LPM (same as main pump).</p>	<p>Standby Pump (Diesel) Same as main~30–40 Backup in case of power failure-but During audit not provided at site</p>	<p>Reasons for Diesel Pump Requirement</p> <p>Power Failure Protection</p> <p>Fire emergencies often cause electrical failures. A diesel pump guarantees firefighting water supply even when electricity is unavailable.</p> <p>Redundancy</p> <p>NBC 2016 mandates that hydrant systems must have two main pumps of equal capacity:</p> <p>One electric-driven pump.</p> <p>One diesel-driven standby pump.</p> <p>Both must deliver the same flow (2,850 LPM) and head (\approx 60–80 m).</p>
	<p>- Auto Starting/Manual Stopping</p>	<p>NBC 2016 Requirement</p> <p>All fire pumps must be auto-start and manual-stop type.</p> <p>Jockey pump: Auto start/stop (to maintain pressure).</p> <p>Main & standby pumps: Auto start, manual stop only.</p>	<p>During the audit, auto-starting and manual-stopping arrangement of the fire pump was required as per NBC/IS standards; however, this provision was not</p>	<p>Auto Starting Immediate Response: In a fire, every second counts. Pumps must start automatically when pressure drops (hydrant opened or sprinkler activated).</p>



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		provided at site	<p>No Human Delay: Emergencies may occur at night or when staff are absent. Auto-start ensures water supply begins instantly without waiting for manual action.</p> <p>Reliability: Connected to pressure switches or controllers, the pump reacts to system demand without operator intervention.</p>
- Pump House Access	<p>Key Requirements for Pump House Access</p> <p>Unobstructed Entry: Doors should be wide enough for equipment movement and kept free of storage or blockages.</p> <p>Separate Location: Ideally located away from main building, or in a fire-rated enclosure if inside.</p> <p>Ventilation: Adequate airflow for diesel pump operation and to prevent overheating.</p> <p>Drainage: Floor drains to avoid water accumulation.</p> <p>Security: Restricted access to authorized personnel only, but not locked in a way that delays emergency use.</p> <p>Signage: Clear identification (“Fire Pump Room”) for quick recognition.</p>	For a G+2 Educational Building, a fire pump house is required as per NBC 2016 Part IV. Its absence is a serious non-compliance that must be rectified.”	<p>Why Pump House Access Matters</p> <p>Emergency Readiness: Fire pumps must be accessible at all times for quick operation and inspection.</p> <p>Maintenance: Easy entry ensures pumps can be serviced without delay.</p> <p>Safety: Clear access prevents obstruction during emergencies.</p> <p>NBC 2016 Compliance</p>
* Terrace Level			
- Discharge of pump	<p>Terrace Pump Flow (Discharge):</p> <p>Usually 450–900 LPM depending on building height and occupancy.</p> <p>For Educational Building, NBC often specifies 450 LPM for 30 minutes as terrace pump discharge.</p> <p>For larger complexes, flow may be higher (up to 900 LPM).</p>	Due to the increase in area, three booster pumps have been installed on the terrace, each with a capacity of 3 HP and 480 LPM	<p>Purpose of Terrace-Level Tank & Pump Secondary Storage: A terrace-level tank ensures water availability at higher floors, reducing dependency on underground tanks during emergencies.</p> <p>Gravity Supply: Water stored at terrace level</p>



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			<p>can flow by gravity to hydrants or sprinklers, ensuring pressure even if pumps fail temporarily.</p> <p>Quick Response: Terrace tanks provide immediate water for initial firefighting until the main underground tank and pumps take over.</p> <p>NBC 2016 Compliance: The National Building Code recommends terrace tanks (often 20,000–50,000 liters) for buildings above certain heights, especially residential and commercial occupancies.</p>
- Head of the Supply	Terrace pump head = 28 m, same as main pump, but with smaller discharge (~450 to 900 LPM)	<p>Terrace pump discharge: head 20m 480 LPM (NBC minimum for Educational Building-type occupancy).</p> <p>Purpose: Provides immediate water at terrace level hydrants/sprinklers until the main underground tank and pumps take over. During audit provided at site</p>	<p>Purpose of Terrace-Level Tank & Pump Secondary Storage: A terrace-level tank ensures water availability at higher floors, reducing dependency on underground tanks during emergencies.</p> <p>Gravity Supply: Water stored at terrace level can flow by gravity to hydrants or sprinklers, ensuring pressure even if pumps fail temporarily.</p>
- Power of Supply	5 HP fire pump must have a dedicated 3-phase, 415 V supply with proper control panel and backup source.	3 HP fire pump must have a dedicated 3-phase, 415 V supply with proper control panel and backup source.	At terrace level, the booster pump should be provided with discharge capacity of ~450 to 600LPM and head of 32 m. The corresponding motor power requirement is ~5 HP, ensuring adequate



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			supply to upper floor hydrants/sprinklers.
	- Auto Starting of pump	Code Requirement: As per NBC 2016 and IS standards, fire pumps should have automatic start arrangements to ensure water supply without human intervention.	This ensures reliable supply at 480 LPM discharge and 20 m head. But during audit not provided at site
			Terrace pump power \approx 5HP, sized for 450 LPM discharge at 32 m head. Why Auto Starting is Important Immediate Response: The terrace fire pump must start automatically when there is a drop in pressure in the system (for example, when a sprinkler or hydrant is opened).
14	Captive Water Storage for Fire Fighting		
	* Underground Tank Capacity	Fire Water Storage Requirements (NBC 2016 – Moderate Hazard Occupancy) Underground Static Tank: 150,000 liters (150 m ³) minimum capacity. Overhead Tank: 20,000 liters (20 m ³) minimum capacity for terrace supply.	that underground tank capacity 75000 During audit not provided at site, Capacity of underground static tank must be specified to verify compliance with NBC 2016 requirements (minimum 150,000 liters for Educational Building G+2 with basement).”
	- Draw-off connection	Purpose of Draw-off Connection Ensures Pump Suction: Provides a dedicated outlet from the tank to the fire pump suction line. Maintains Reserve: Located slightly above the tank floor to avoid drawing sludge/silt. Reliability: Guarantees uninterrupted water supply during firefighting operations. NBC 2016 Compliance: Fire tanks must have proper draw-off connections sized to match pump capacity.	.The underground fire water tank must be provided with a properly sized draw-off connection at the lowest usable level, connected directly to the fire pump suction line, with isolation valve and strainer. This ensures uninterrupted supply during firefighting and compliance with NBC 2016. But during audit not provided at site Location: At the bottom portion of the tank, but raised ~150 mm above floor to prevent sediment entry. Size: Diameter of draw-off pipe should match pump suction size (commonly 150 mm or larger, depending on pump capacity). Valves: Equipped with isolation valves and strainers to allow maintenance and prevent debris entry. Dedicated Line: Must be separate from domestic water supply connections.



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<p>- Fire service inlet</p>	<p>Emergency Backup: Enables fire engines to directly feed water into the hydrant network. System Pressurization: Maintains pressure in case internal pumps fail. Compliance: NBC 2016 requires fire service inlets for all hydrant systems.</p>	<p>The fire service inlet is the point where fire brigade connects their hoses to pump water into the hydrant system, ensuring redundancy and compliance. During audit provided at site</p>	<p>Typical Requirements Location: Installed at the ground floor/road level, easily accessible to fire engines. Clearly marked and unobstructed. Connection Details: Usually a 4-way or 6-way inlet (depending on system size). Each inlet fitted with male instantaneous couplings (63 mm dia). Connected to the fire water tank/pump suction line via non-return valve.</p>
<p>- Access to tank</p>	<p>Typical Requirements Manhole/Ladder Access: Tanks must have a manhole (minimum 600 mm × 600 mm) for entry. Safe ladder or staircase provided for reaching the tank top. Lockable Cover: Manhole covers should be lockable to prevent unauthorized entry or contamination. Ventilation: Vent pipes with insect-proof mesh to allow airflow and prevent stagnation. Signage: Clearly marked “FIRE WATER TANK – ACCESS” for identification. Safety Railings: If tank is elevated, railings around access points must be provided.</p>	<p>During the audit, underground fire water tank was required as per NBC/IS standards; however, the tank was not available at site along with the access ladder.</p>	<p>Provision of underground static tank with proper capacity and safe access ladder is mandatory for compliance. Absence of both was noted at site.</p>
<p>* Overhead Tank Capacity</p>	<p>At terrace level, an overhead fire water tank of 20,000–50,000 liters capacity should be provided, connected to a booster pump. This ensures immediate supply to upper floor hydrants/sprinklers and compliance with NBC 2016.</p>	<p>During the audit, an overhead fire water tank of 20,000 liters. capacity was provided at site</p>	<p>As per NBC 2016 requirements for Institutional building (G+2 with basement), minimum overhead tank capacity should be 20,000 liters. The</p>



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				provided capacity (6,000 liters) is inadequate and does not meet code compliance Overhead tank: Recommended 20,000–liters.
15	Exit Signage	<p>Placement: Above doors, corridors, staircases, and at every change in direction.</p> <p>Compliance: NBC 2016 requires exit signs in all public buildings, resorts, hotels, and complexes.</p> <p>Design: Green background with white letters or symbols (“EXIT”), often with arrows.</p>	<p>Exit signage = clear, illuminated signs showing escape routes for safe evacuation.</p> <p>During audit provided at site</p>	<p>Key Points</p> <p>Purpose: Shows the direction of escape routes clearly.</p> <p>Visibility: Must be illuminated (electric or photo-luminescent) and visible even in smoke or darkness.</p>
16	Provision of Lifts	Lift installation is mandatory in G+2 Educational Building with basement as per NBC 2016 for accessibility, evacuation, and compliance. Absence of lift provision was noted	During the audit, provision of lifts was required for the building; however, Yes provided at site.	<p>Why It Matters</p> <p>Accessibility: Lifts are essential for persons with disabilities, elderly occupants, and general convenience.</p> <p>Evacuation & Safety: Fire-rated lifts are required for emergency evacuation in multi-storey buildings.</p> <p>Code Compliance: NBC 2016 specifies lift provision for buildings above certain height and occupancy type.</p> <p>Audit Impact: Non-provision of lifts is a major non-compliance issue.</p>
	* Pressurization of Lifts shafts	<p>Pressurization of Lift Shafts</p> <p>Purpose: Prevents smoke from entering the lift shaft during a fire.</p> <p>Requirement: NBC 2016 mandates pressurization fans for high-rise/Pressurization of Lifts shafts.</p> <p>Audit Note: “Pressurization of lift shafts not provided at site</p>	Prevents smoke from entering lift shafts during fire. Not provided at site.	
	* Pressurization of Lifts lobby	<p>Pressurization of Lift Lobby</p> <p>Purpose: Keeps lift lobbies smoke-free, ensuring safe refuge and access for firemen.</p> <p>Audit Note: “Pressurization of lift</p>	Keeps lift lobbies smoke-free for safe refuge and firemen access. Not provided at site.	



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	lobbies not provided at site		
* Communication Facility in lift	<p>Communication Facility in Lift Purpose: Two-way communication (intercom/telephone) between lift car and control room for emergency use. Audit Note: "Communication facility in lift not provided at site"</p>	<p>Two-way communication (intercom/telephone) between lift car and control room for emergencies. Not provided at site</p>	
* Fireman's Grounding Switch	<p>Fireman's Grounding Switch Purpose: Allows fire service personnel to take control of the lift during emergencies. Audit Note: "Fireman's grounding switch not provided at site"</p>	<p>Allows fire service personnel to take control of the lift during fire emergencies. <i>Not provided at site</i></p>	
* Lift Signages	<p>Lift Signages Purpose: Mandatory safety signages such as "Do not use lift in case of fire" and directional signs. Audit Note: "Lift safety signages not provided at site"</p>	<p>Mandatory safety signs such as "Do not use lift in case of fire." Not provided at site</p>	



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17	Standby Power Supply	YES	During audit provided at site	Here is DG for alternative electricity
18	Refuge Area			
	* Total Area	A typical building with basement is usually below 15–18 m height (depending on floor heights). Since the height is less than 24 m, refuge area is not mandatory under NBC 2016. However, if the building height exceeds 24 m (for example, if each floor is unusually tall), then refuge area becomes compulsory.	During the audit, refuge area provision was checked. As the building height is below 24 m, refuge area is not mandatory as per NBC 2016.”	Purpose of Refuge Area Safe Holding Zone: Provides temporary shelter for occupants until rescue or evacuation is possible. Protection from Fire/Smoke: Located in fire-resistant zones, usually open to air, to prevent smoke accumulation. Facilitates Rescue: Firefighters can access and evacuate people from refuge areas more easily. Mandatory in High-Rise: Required in buildings above 24 m height (residential) and 15 m (other occupancies).
	* Location	Since the height is less than 24 m, refuge area is not mandatory under NBC 2016.	During audit not provided at site	Refuge area has been not provided as per NBC 2016 Part 4 requirements, with minimum area of 15 m ² or 0.3 m ² per person, whichever is higher, located at prescribed levels to ensure safe holding zones during fire emergencies
19	Fire Control Room			
	* Control Room	A typical G+2 building is usually below 15–18 m height. If the building height is less than 15 m, a dedicated fire control room is not mandatory. If the building height is above 15 m, then a fire control room is required	During the audit, fire control room provision was checked. No fire control room was found at site	Mandatory Provision: Fire Control Room is required in high-rise buildings (above 15 m height) and in buildings with complex occupancy (like mercantile, assembly, institutional). Functions: Central monitoring of fire alarm system. Control of fire pumps and emergency power. Communication with lifts and fire services. Display of fire detection and suppression systems
	- Detection System	Detection System (Automatic Fire	Detection system provided at site	



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		Detection) Mandatory in high-rise buildings 15 m and above. For less than 15 m buildings, not compulsory unless special occupancy (assembly, institutional, hospital, etc.).		
	- Flow Switch Panel	Flow Switch Panel (Sprinkler Monitoring) Required only if automatic sprinkler system is installed.	During audit Flow switch panel not found at site	
	- PA System Panel	NNBC 2016 requires these advanced systems mainly for high-rise 15m and above. For less than 15 m Buildings, they are not compulsory,	During audit PA System panel not found at site	
	- Battery Backup, if any	Fire Alarm Systems: Must have secondary power supply (battery backup) capable of running the system for minimum 24 hours in normal mode + 30 minutes in alarm mode. Emergency Lighting: Battery backup should last at least 90 minutes to cover evacuation time. Exit Signage: Must remain illuminated during power failure, typically with self-contained battery units.	Battery backup has been provided for fire alarm panels, emergency lighting, and exit signage, ensuring uninterrupted operation during mains power failure, in compliance with NBC 2016 Part 4 During audit 1 DG SET 62 kva Provided at site	Why Battery Backup is Needed Fire Alarm & Detection Systems: Must remain operational even if mains power fails. Emergency Lighting & Exit Signage: Illuminated signs and lights guide occupants safely during evacuation. Communication Systems: Public address (PA) and intercom systems need backup to coordinate evacuation. Control Panels: Fire pump controllers, alarm panels, and monitoring systems require uninterrupted power.
	- Building Floor Plans	Building floor plans must be maintained and displayed, showing fire exits, escape routes, fire safety installations, and	Floor plans are required to demonstrate fire safety compliance,	Reasons Floor Plans Are Needed Fire Safety Compliance: Show the location of fire exits,



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		<p>refuge areas. These are essential for compliance with NBC 2016 Part 4 and for effective emergency response</p>	<p>guide evacuation, and assist fire services during emergencies During audit not provided at site</p>	<p>staircases, refuge areas, hydrants, extinguishers, and fire alarm systems. Help verify NBC 2016 Part 4 requirements. Emergency Evacuation: Clearly indicate escape routes for occupants. Assist fire brigade in quickly understanding building layout during rescue. System Integration: Mark positions of fire pumps, tanks, service inlets, and control rooms. Ensure proper connectivity of detection and suppression systems.</p>
20	Special Fire Protection Systems for Protection from Special Risks			<p>Note by the auditor: During the audit Increase Fire Extinguisher capacity 4.5 kg Co2 to comply with NBC 2016 requirements. Augment the number and type of fire extinguishers as per NBC standards and ensure regular servicing. Conduct regular fire training and drills for staff to strengthen emergency response readiness.. Integrate these systems with the building's fire alarm panel for centralized monitoring. Conduct periodic testing and maintenance of installed systems to ensure reliability. It was observed during the audit that no fire hydrant was present. It is recommended that a fire hydrant be installed. It was observed during the audit</p>



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				that no fire alarm system was present. Installation of a fire alarm system is recommended
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The fire safety systems provided in the building have been tested and inspected as per the guidelines of NBC 2016 Part IV and were found to be in working order (operational/non-operational) at the time of inspection. It is proposed to evaluate and improve compliance with the minimum standards of fire prevention and fire safety as per the rules.

This report details all fire safety information of the building, and a photos has also been attached.

Term and Condition-

The Fire NOC is issued subject to strict compliance with applicable fire safety norms, rules, and regulations. The responsibility for implementation, maintenance, and effectiveness of all fire safety measures shall rest solely with the owner/occupant.

- 1) The authority/owner, will be fully responsible for ensuring that all fire safety systems, equipment, and lifesaving devices established at **SHRI RAMKRISHNA PUBLIC SCHOOL, BILASPUR ROAD, SINGHANPURI, KAWARDHA, DIST. - KABIRDHAM(C.G.)491995 Chhattisgarh**, are always functional.
- 2) All fire-fighting equipment, fire detection systems, emergency exits, stairways, and escape routes should always be kept free of obstructions and in good working condition..
- 3) All employees and residents should be properly trained in the operation of fire-fighting equipment and emergency evacuation procedures. Mock drills should be conducted regularly, and records of such training and drills should be maintained.
- 4) If any building work or modification is done without the prior approval of the competent authority, the fire NOC will be canceled.
- 5) Renewal of the Fire Safety Certificate requires proper maintenance of all firefighting equipment and systems according to inspection team recommendations and applicable statutory requirements.
- 6) It shall be noted that the owner/occupier shall take 6 monthly self-declared certificate (As per Form-R of Latest Gazette Notification 2025) by the empanel ed TPA. The NOC is been issued on the basis of the conditions mentioned in the Inspection Report of your premise.
- 7) It recommends renewal of fire NOC on the condition of increasing Co2 4.5kg fire extinguisher , Fire alarm system,

Signature of the Auditor along with seal (Self/Firm)

Name of Auditor: RAJU SAHU

License Number:

Mobile No. :

9981628106