



ODISHA FIRE SERVICE
FIRE SAFETY RECOMMENDATION
FORM-II
[Under Rule-12 (5)]



RECOMMENDATION No:	RECOMM1103100062022000879	APPLICATION No:	FSR1103100062022000757
Date of Issue:	31-10-2022	Date of Receipt of Application:	20-10-2022

1.	Name & Address of the proposed Building/Premises:	Proposed Residential buildings i.e S+5 (Block-A), S+5 (Block-B) & B+S+5 (Block-C), Mouza - Puri Sahara, Unit No-3, Mangalaghata, Tahasil-Puri, Dist-Puri
2.	Name and Address of the Applicant(s):	Sri Jagat Kumar Kar, C/o Achyuta Kumar Kar, Plot No-4704/7180, Adimata Colony, Gadakana, Bhubaneswar.
3.	Proposed Occupancy (Type of Building):	S+5 (Block-A), S+5 (Block-B) & B+S+5 (Block-C) building is categorized under Group-A Residential building as per NBCI, 2016. It is coming under jurisdiction of Puri Konark Development Authority, Puri.
4.	Area with Plot Number and Khata Number:	Plot area – 3941.60 sqm. Over Plot No - 79, 80, 81 & 82, Khata No – 379
5.	Date of Inspection:	28-10-2022

6. Recommendation:



The Fire Safety Recommendation for the following building(s) is/are as follows: -

A.	Structural and construction site requirements:	
i.	Details of the building(s) like height, no. of floors, area on each floor, built up area, etc	<p>S+5 floors (Block-A) Stilt floor-261.29 sqm-Parking and services. 1st floor-257.11 sqm-Reception, Dining, Kitchen, Store 2nd to 5th floor-257.11 sqm -Room-07 Nos & Toilet in each floor Total built up area-1546.84 sqm</p> <p>S+5 floors (Block-B) Stilt floor-706.45 sqm-Parking and services. 1st to 5th floor-625.44 sqm-Bed Room, Kitchen & Toilet in each floor Total built up area-3833.65 sqm</p> <p>B+S+5 floors (Block-C) Basement floor-714.33 sqm-Parking and services Stilt floor-852.75 sqm-Parking and services. 1st & 2nd floor-781.49 sqm-Bed room, Kitchen, toilet & Society room in each floor 3rd to 5th floor-708.55 sqm - Bed room, Kitchen & toilet in each floor Total built up area-4541.38 sqm</p> <p>Height:- Height of the proposed S+5 (Block-A & Block-B) building from ground level- 17.35 mtrs each including 2.40 mtrs stilt floor. Height of the proposed B+S+5 (Block-C) building is 18.55 mtrs. including height of the roof of basement 1.20 mtrs from ground level & 2.40 mtrs stilt floor.</p>
ii.	Parking	<p>As shown in the plan there is provision of basement floor and stilt floor parking for the proposed building. Required provision of parking shall be made in accordance to ODA(P&BS) Rules, 2020.</p>
iii.	Access To The Building	<p>As shown in the plan there is provision of 9.14 mtrs. width abutting road to the proposed building. As shown in the plan there is provision of 01 No main entrances having width 06.09 mtr for the proposed building. As per ODA(P&BS) Rules, 2020 main entrance to the premises shall not be less than 06 mtrs. The main gate shall fold back against the compound wall of the premises. If the main entrance gate is built over, the height of the same shall not be less than 05 mtrs. Provisions for access to the premises shall be provided as per ODA(P&BS) Rules, 2020.</p>
iv.	Open spaces (In Mtrs.)	<p>As per the plan, provision of the following setbacks have been proposed:-</p> <p>Block-A Front-Min-3.05 mtrs, Max-4.05 mtrs. Rear- 6.09 mtrs Left- 3.05 mtrs. Right- 6.09 mtrs.</p> <p>Block-B Front- Min-3.05 mtrs, Max-4.09 mtrs. Rear- Min-3.05 mtrs, Max-3.17 mtrs Left- Min-3.05 mtrs, Max-4.82 mtrs. Right- 6.09 mtrs.</p> <p>Block-C Front- Min-3.05 mtrs, Max-4.48 mtrs. Rear- 3.03 mtrs Left- 6.09 mtrs. Right- Min-3.05 mtrs, Max-3.51 mtrs.</p> <p>The covering slabs of underground water tank, soak pit, recharge tank, septic tank etc, if any which are proposed to be positioned in the compulsory open space area must have appropriate load bearing capacity. The space set apart for providing access within the premises shall be open to the sky and not to be used as parking space and shall be free from obstruction at all the time. Besides, the entire specified open space shall be kept unbuilt and driveway shall be constructed of hard surface capable of taking load of fire engine weighing 45 tons minimum for easy access of fire engine as per ODA(P&BS) Rules, 2020. Load bearing capacity certificate from the competent authority shall be obtained to that effect. Setbacks shall be provided as per ODA (P&BS) Rules, 2020.</p>



v.	Exits (Type, Number, Dimension & Ramp Arrangement)	<p>As shown in the plan there are provisions of 02 Nos. of ramp from basement to ground level having width 03.43 mtrs.</p> <p>Ramps shall be provided in the building as per ODA(P&BS) Rules, 2020.</p> <p>As shown in the plan there are provision of 01 No. staircase for the proposed building Block-A which are running from Stilt floor to terrace but parameter not mentioned in plan.</p> <p>As shown in the plan there are provision of 02 Nos. staircases for the proposed building Block-B which are running from Stilt floor to terrace but parameter not mentioned in plan.</p> <p>As shown in the plan there are provision of 02 Nos. staircases for the proposed building Block-C which are running from Basement floor to terrace but parameter not mentioned in plan.</p> <p>As per requirement of ODA (P&BS) Rules, 2020, the minimum width of staircase shall be 1.25 mtrs. The minimum width of treads without nosing shall be 0.25 meter for staircase. The maximum height of riser shall be 0.19 meter.</p> <p>The staircases of basement shall be of enclosed type having fire resistance door of not less than two hours.</p> <p>As shown in the plan the proposed building Block-C staircases are running from basement floors. Hence, the access to the basement shall be separate from the main and alternative staircase providing access and exit from higher floors shall be provided and where the staircase is continuous in the case of buildings served by more than one staircase, the same shall be of enclosed type serving as a fire separation from the basement floor and higher floor.</p> <p>The exits/staircases must be placed as remote from each other as possible and also comply to other provisions i.e. permissible travel distance, dead end corridor length in exit access etc, as per the provisions of ODA(P&BS) Rules, 2020.</p> <p>Staircase constructed with external wall shall be cross ventilated or pressurized and staircase constructed with internal wall shall be pressurized.</p> <p>Mechanism for pressurizing the staircase shall operate automatically with the fire alarm.</p> <p>The cross ventilation requirement of the staircases shall be achieved through opening at each landing of an area 0.5 m² in the external wall. Such opening shall be provided in opposite/ adjacent wall or the same shall be cross ventilated through the corridor.</p> <p>Access to main staircases be gained through automatic closing fire check doors of 02 hrs. rating.</p> <p>External exit door of staircase enclosure at ground level shall open directly to the open spaces or can be reached without passing through any door other than a door provided to drought lobby.</p> <p>Provision and Numbers of Staircases for different blocks shall be provided as per ODA(P&BS) Rules, 2020.</p> <p>All the exits required to be accessible from the entire floor area at all floor levels.</p> <p>All staircases must be of non-combustible materials.</p> <p>No exit doorways shall be less than 01 mtrs. in width and height less than 02 mtrs.</p> <p>Access to the all exit staircases shall be through a fire door of minimum 120 min fire resistance rating.</p> <p>The minimum number of exit and their width required on every floor of the buildings and their dimensions must be in accordance with Part-IV of NBCI-2016 and exit requirements of ODA(P&BS) Rules, 2020.</p> <p>The use of mirrors is not permitted in enclosures for exits & exit passage way.</p> <p>The escape routes should be well ventilated and provided with safety lighting and free from obstructions.</p> <p>Exits must be clearly visible and all routes to reach the exit have to be clearly marked and sign posted to guide the population of the floor concerned. Signage's required to be illuminated and wired to an independent electrical circuit on an alternative source of supply.</p> <p>Exit signs and Floor exit plan must be provided such that no point in an exit access is more than 30 mtrs from a visible exit directional sign. Provision of escape lighting and exit signage needs to be made in accordance with Part-4, NBCI-2016 & IS 9457:1980, IS 12349:1988, IS 12407:1988.</p> <p>All landings of floor must have floor indication boards indicating the number of floors.</p> <p>In addition to above all other provisions for exits/doorways/stairways, means of escape and exit shall be made as per NBCI-2016 and ODA(P&BS) Rules, 2020.</p>
vi.	Firefighting Shaft	<p>Fire fighting shaft shall be provided for the proposed building as per NBCI-2016 and ODA (P&BS) Rules, 2020.</p> <p>Provision and requirement of fire fighting shaft shall comply to the requirements as specified in Clause-2.24 Part-4 of NBCI-2016 and as per ODA (P&BS) Rules, 2020.</p>
vii.	Lifts	<p>As shown in the plan there is provision of 01 No. of lift for Block-A which are running from Stilt to top floor for the proposed building.</p> <p>As shown in the plan there are provisions of 02 Nos. of lift & 01 No of Stretcher lift for Block-B which are running from Stilt to top floor for the proposed building.</p> <p>As shown in the plan there are provisions of 02 Nos. of lift & 01 No of Stretcher lift for Block-C which are running from Basement to top floor for the proposed building.</p>



Grounding switch, at ground level, to enable fire service to ground the lift shall be provided. Lift car door shall have a fire resistance rating of 01 Hrs. The lift shall have a floor area of not less than 1.4 sqm. It shall have loading capacity not less than 545 kg/ 08 person with automatic closing door. Collapsible gates shall not be permitted for lifts and shall have solid doors with fire resistance of at least 01 Hr.

A sign shall be posted and maintained on every floor at or near the lift indicating floor plan of each floor showing the locations of the stairways.

If the lift shaft and lobby is in the core of the building, a positive pressure between 25 and 30 pa shall be maintained in the lobby and a positive pressure of 50 pa shall be maintained in the lift shaft. The mechanism for pressurization shall act automatically with the fire alarm/sprinkler and it shall be possible to operate this mechanically also.

Lift lobbies segregation with 02 hours fire resistance rating door and pressurization is required for lift communicating from ground to basement.

Exit from the lift lobby, if located in the core of the building, shall be through a self-closing smoke stop door of half an hour fire resistance.

For non-naturally ventilated areas fire doors with 120 min fire resistance rating with panic bar shall be provided and particularly at the entrance to lift lobby and stair well where a funnel or flue effect may be created, inducing and upward spread of fire, to prevent spread of fire and smoke.

The required fire safety measures in fireman lift shall be made as per NBCI-2016 and as per ODA(P&BS) Rules, 2020.

The word "FIRE LIFT" shall be conspicuously displayed in fluorescent paint on the lift landing doors at each floor level.

The speed of the fire lift shall be such that it can reach to the top floor from ground level within one minute.

Provision and requirement of lift shall be made as per ODA (P&BS) Rules, 2020.

Other features of lift shall be provided as per NBCI-2016, ODA (P&BS) Rules, 2020 and other relevant standards.

viii.

Building Services

Electrical Service

Electrical Services: -

A stand-by diesel generator shall be installed to supply power to staircase and corridor lighting circuits, fire lifts, the stand-by fire pumps, pressurization fans and blowers, smoke extraction and damper system in case of failure of normal electric supply.

The emergency lighting shall be on separate service and shall be independently connected so as it could be operated by one switch installation on the ground floor, easily accessible to firefighting staff at any time irrespective of the position of the individual control of the light points, if any.

Emergency lighting shall also be connected to alternate supply from parallel high-tension supply or to the supply from the stand-by generator. All wires and other accessories used for emergency light shall have fire retardant property.

The staircase and corridor lighting shall be on separate service and shall be independently connected so as it could be operated by one switch installation on the ground floor, easily accessible to firefighting staff at any time irrespective of the position of the individual control of the light points, if any.

Staircase and corridor lighting shall also be connected to alternate supply from parallel high-tension supply or to the supply from the stand-by generator. All wires and other accessories used for emergency light shall have fire retardant property.

The electric distribution cables or wiring shall be laid in separate duct which shall be sealed at every floor with non-combustible materials having the same fire resistance as that of the duct. Low and medium voltage wiring running in shaft and in false ceiling shall run in separate conduits. Water mains, telephone cables, intercom cables, gas pipes or any other service line shall not be laid in the duct for electric cables.

Transformer shall be installed as per the National Building Code of India -2016, Indian Electricity Rule and required fire protection measures be taken for the transformer.

Electrical Installations in the building shall comply to the provisions as per NBCI-2016 and ODA (P&BS) Rules, 2020.

Provision for lightning protection shall be made in the proposed building as per IS/IEC 62305-4:2010.

Air Conditioning

Air Conditioning: - If Central Air Conditioning system provided, Escape routes like staircases, common corridors, lift lobbies shall not be used as return air passage.

Air ducts serving main floor areas, corridors, shall not pass through the staircase enclosure.

The air-handling units shall be separate for each floor and air ducts for every floor shall be separated and in no way inter-connected with the ducting of any other floor.

Wherever the ducts pass through fire walls or floors, the opening around the ducts shall be



		<p>sealed with materials having fire resistance rating of the compartment. Such duct shall also be provided with fire dampers at all fire walls and floors unless such ducts are required to perform for fire safety operation.</p> <p>The Air Conditioning shall also be coupled with fire detection and alarm system.</p> <p>Metallic ducts shall be used even for the return air instead of space above the false ceiling.</p> <p>The materials used for insulating the duct system (inside or outside) shall be of non-combustible material.</p> <p>Air Conditioning system in the building shall comply to the provisions as per NBCI-2016 and ODA (P&BS) Rules, 2020.</p>
	Gas supply	If gas bank provided, construction and provision of fire safety measures and firefighting measures shall be of IS-6044 of 2000.
	Others	<p>Service Ducts and Shafts: -</p> <p>Openings in walls or floors which are necessary to be provided to allow passages of all building services like cables, electrical wirings, telephone cables, plumbing pipes, etc. shall be protected by enclosure in the form of ducts / shafts and such shaft and inspection doors fitted thereto shall have fire resistance rating not less than as per NBCI-2016 and ODA (P&BS) Rules, 2020.</p>
ix.	Fire Command Centre	There shall be a Fire Command Centre on entrance floor of the building having direct access. The Fire Command Centre shall have the main fire alarm panel with communication system (suitable public-address system). All controls and monitoring of fire alarm systems, pressurization systems, smoke management systems shall happen from this room. Fire Command Centre shall have provisions as per NBCI-2016.
x.	Other requirements	<p>Basement:-</p> <p>Basements shall be provided with natural ventilation. Adequate ventilation shall be provided for the basement and the standard of ventilation shall be the same as required by the particular occupancy according to regulations; any deficiency may be met by providing adequate mechanical ventilation in the form of blowers, exhaust fans (one exhaust fan for 50 square meters of basement area), air conditioning system;</p> <p>The use and construction of the basement shall provided as per ODA (P&BS) Rules, 2020.</p> <p>Construction:-</p> <p>During construction of the proposed high rise building the following fire protection measures shall be provided: -</p> <ol style="list-style-type: none"> Dry riser of minimum 100 mm diameter pipe with hydrant outlets on the floors. Drums of 2000 litter capacity filled with water with 02 fire buckets on each floor. A water storage tank of minimum 20,000-liter capacity. <p>All floors shall be compartmented/zoned with area of each compartment being not more than 750 m².</p> <p>The minimum fire resistance ratings of structural and non-structural elements shall be as given in Table-1 of NBCI-2016.</p> <p>The false ceiling, including all fixtures used for its suspension shall be of non-combustible material and shall provide adequate fire resistant to the ceiling in order to prevent spread of fire across ceiling.</p> <p>Refuse chutes if any provided in the building shall complied with provision of NBCI-2016.</p> <p>The apartment buildings without balcony shall provide refuse area as mentioned in Annexure-E-4 of Part-IV of NBCI-2016.</p> <p>Provision of refuse area shall be made as per requirement of NBCI-2016.</p> <p>The structural safety design and construction of the building shall be done as per NBCI-2016 and ODA (P&BS) Rules, 2020.</p>
B.	Fixed Fire Fighting Installations :	
i.	Fire Extinguisher	Provision of fire extinguishers shall be made in the building for Block-A, B & C. (BIS 2190)
ii.	First- Aid Hose Reel	First-aid hose reel shall be provided in all floor of the building for Block-A, B & C. (BIS 884 & BIS 3844)
iii.	Wet Riser	Not required



iv.	Down Comer	The proposed building for Block-A, B & C is required to be provided down comer as per BIS 3844:1989 or amended. The internal diameter of the riser main required to be provided as per IS:901:1988 or amended. Fire hose with branch pipe and nozzle required to be provided as per IS:903:1984 or amended and kept adjacent to the hydrant in hose boxes.
v.	Yard Hydrant	Not required
vi.	Automatic Sprinkler System	Automatic water sprinkler system with sprinkler heads shall be provided for Block-C in basement floor of the building & First floor of Block-A building including both below & above the false ceiling (Where void space exceeds 800 mm) at suitable intervals and height. Installation of Sprinklers shall be provided in accordance to BIS specification 15105:2002 and 9972:2002 or amended. Automatic Water Sprinkler System shall not be provided for the electrical installations, UPS/Battery room or areas where water discharge may pose a hazard. Automatic sprinklers with Response Indicator shall be installed in false ceiling voids exceeding 800 mm in height.
vii.	Manually Operated Electronic Fire Alarm System	Manually Operated Electronic fire alarm system at conspicuous places in all floors of the building for Block-A, B & C shall be provided. Manually operated electronic fire alarm system shall also include talk-back and Public Address System. (IS/ISO 7240-11:2011 or amended).
viii.	Automatic Detection Alarm System	Not required
ix.	Underground Static Water Storage Tank	Not required
x.	Terrace Tank	Terrace Tank of 25,000 ltrs. capacity shall be provided at the top of the each building for Block-A, B & C for fire fighting purpose. It should be ensured that water in the tank is not utilized for any other purpose other than firefighting.
xi.	Pump Near Underground Static Water Storage Tank	Not required
xii.	Pump At Terrace Tank Level With Minimum Pressure Of 3.5 Kg/Cm ²	Provision of terrace pump of 900 LPM capacity having connectivity to terrace tank shall be made for the building of Block-A, B & C.
xiii.	Provision for commercial kitchen	There is provision of commercial kitchen in Block-A. Fire and life safety measures / installations shall be made in the kitchen as per Annex-G part-4 of National Building Code of India-2016.
xiv.	General	All the firefighting & life safety measures shall confirm to Odisha Development Authorities (Planning and Building Standards) Rules, 2020, National Building Code of India and other relevant Rules and Indian Standards.
C.	Opinion :	<p>The site for construction of Proposed Residential buildings i.e S+5 (Block-A), S+5 (Block-B) & B+S+5 (Block-C), Over Plot No - 79, 80, 81 & 82, Khata No – 379, Mouza - Puri Sahara, Unit No-3, Mangalaghata, Tahasil-Puri, Dist-Puri was inspected by Fire Officer, Central Range, Cuttack being accompanied by AFO, Puri Fire Station in presence of the Authorized person of the proposed building. The recommendation is prepared as per provision of OFP & FS Rules-2017, Odisha Development Authorities (Planning and Building Standards) Rules, 2020, NBCI-2016, and other relevant Rules and Indian Standards.</p> <p>The site is suitable for construction of above proposed structures subject to condition that the owner/occupier shall incorporate the above furnished recommendations in the proposed structure. Besides, if the authority concerned will feels the requirement of additional fire safety requirements in future then the owner/occupier will adhere all recommendations issued by this department.</p> <p>After completion of the construction work including installation of fixed firefighting measures as suggested, the applicant shall be required to apply for Fire Safety Certificate as per Rule 13 (1) of Odisha Fire Prevention and Fire Safety Rules, 2017, along with following documents: -</p> <p>i. The applicant shall produce a certificate to be issued by the person concerned to the effect</p>



that all the provisions of Bye-Laws / Regulations of ODA (P&BS) Rules, 2020 and Recommendations issued from this office have been incorporated in the building.

ii. The applicant shall produce a certificate of the Competent Authority concerned to the effect that electrical installations have been done as recommended and as per provisions given in Part-8 "Building Services, Section-2 Electrical and allied installations" of NBCI-2016 and Section-7 of National Electrical Code, 2011.

iii. The applicant shall produce a certificate of the agency concerned to the effect that installation of firefighting measures has been done as recommended and as per provisions given in Part-4 of National Building Code of India-2016 and relevant BIS specifications.



Range Fire Officer, Central
Range-I, Cuttack

NOTE

- (i) It is a digitally signed electronically generated certificate and therefore needs no ink-signed signature.
- (ii) This Certificate is issued as per section 4, 5, & 6 of Information Technology Act 2000 and its subsequent amendments in 2008.
- (iii) For any Query or Verification, Agency / Department / Office may visit <http://agnishamaseva.odisha.gov.in>



(iv) Tampering of this Certificate will attract penal action.

