



**OFFICE OF THE FIRE OFFICER (PRINCIPAL),
OFDRA, BHUBANESWAR**

FORM-II

[See rule-12 (5)]

Fire Safety Recommendation

File No: C-100-/2021- FPW (OFDRA)

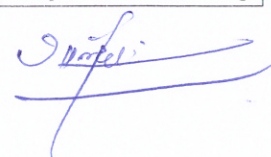
1. Address of the proposed building/premises : - Mouza-Rudrapur, Baliana,
Bhubaneswar, Dist-Khurda
2. Name and Address of the applicant (s) : - Sri. Rajesh Kumar Nayak, Managing Director
M/s Laxmi Infra Venture Pvt. Ltd,
Plot no-315, Saheed Nagar, Bhubaneswa-751007
3. Date of receipt of application : - 14.07.2021
4. Proposed Occupancy (type of building) : - Proposed B+S+5 Storied Residential Building (MIG
Category) is coming under "Residential Apartment" building
as per Odisha Development Authorities (Planning and
Building Standards) Rules, 2020 and "Residential building,
Group-A, Subdivision-A-4, (Apartment Houses)" as per
NBCI-2016.
5. Area with plot number and khata number : - Plot Area-3319.62 Sqm,
Over Plot No-617, 620, 621, 615 & 616,
Khata no-412/144, 412/124, 412/125,
6. Date of Inspection : - 15.07.2021
7. Recommendation: -

The fire safety recommendation is as follows: -

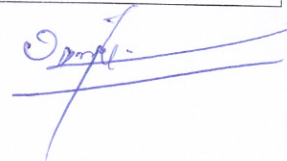
A.	Floor wise occupancy with area	<p>Block-A:- (S+5 Storied Residential Building)</p> <p>Stilt Floor-709.089 sqm -Usage-Parking. 1st Floor-654.471 sqm -Usage-Apartment Houses. 2nd Floor -654.471 sqm -Usage-Apartment Houses. 3rd Floor -654.471 sqm -Usage-Apartment Houses. 4th Floor -654.471 sqm -Usage-Apartment Houses. 5th Floor -654.471 sqm -Usage-Apartment Houses. Terrace Floor -Usage -Open terrace</p> <p>Block-B:- (B+S+5 Storied Residential Building)</p> <p>Basement Floor- 966.580 sqm, -Usage- Parking, Electric Room. Stilt Floor-886.439 sqm -Usage-Parking, Society Room. 1st Floor-854.399 sqm -Usage-Apartment Houses. 2nd Floor -854.399 sqm -Usage-Apartment Houses. 3rd Floor -854.399 sqm -Usage-Apartment Houses. 4th Floor -854.399 sqm -Usage-Apartment Houses. 5th Floor -854.399 sqm -Usage-Apartment Houses. Terrace Floor -Usage -Open terrace</p>
B.	Height	<p>The height of the proposed Block-A will be 14.875 mtrs from ground level excluding height of the stilt floor i.e 2.4 meters, which is exempted as per Regulation-39 (vi) of Odisha Development Authorities Planning and Building Standards Rules, 2020.</p> <p>The height of the proposed Block-B will be 14.875 mtrs from ground level excluding height of the ceiling of the basement roof above the natural ground level and height of the stilt floor i.e 2.4 meters, which is exempted as per Regulation-39(v) & (vi) of Odisha Development Authorities Planning and Building Standards Rules, 2020.</p>
C.	Parking	<p>Provision of basement and stilt floor parking has been proposed in the plan.</p> <p>Provision of parking shall be made in accordance to Rule-37 ODA (P&BS) Rules-2020.</p> <p>The parking space to be provided shall be in addition to the minimum setbacks as required under Regulation-33 of ODA (P&BS) Rules, 2020.</p>

[Signature]

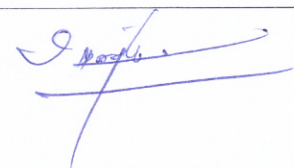
D.	Access to the building	<p>Width of abutting Road or Means of Access proposed – 09.14 meters Road.</p> <p>01 no Main entrance gate has been shown in the plan.</p> <p>Width of main entrance gate shall be 06 meters.</p> <p>The main gate shall fold back against the compound wall of the premises.</p> <p>If the main entrance gate is built over, the height of the same shall not be less than 05 meters.</p> <p>Provisions for access to the building as shown in the plan satisfy the requirement of Regulation-31 & 71 of Odisha Development Authorities (Planning and Building Standards) Rules, 2020.</p>
E.	Setbacks (in meters.)	<p>As per the plan, provision of the following minimum setbacks has been proposed: -</p> <p>Front –4.29 meters, Rear –4.31 meters,</p> <p>Left -4.18 meters, Right –4.62 meters,</p> <p>Provision of open space proposed in the plan satisfies the requirement as per Regulation-33 (1) Table-6 of Odisha Development Authorities (Planning and Building Standards) Rules, 2020.</p> <p>The open space set apart for providing access within the premises shall not be used as parking space or spaces for other amenities required for the building.</p> <p>The covering slabs of underground water tank, soak pit, recharge tank, septic tank etc, if proposed to be positioned in the compulsory open space must have appropriate load bearing capacity.</p>
F.	Exits (Type, Number, Dimension & arrangement)	<p>01 no Staircase in Block-A and 02 nos staircases in Block-B have been proposed in the plan.</p> <p>The clear width of the stairway of the staircases shall not be less than 01 mtrs. The minimum width of treads without nosing shall be 250 mm. The maximum height of riser shall be 190 mm and shall be limited to 12 risers per flight.</p> <p>The travel distance to an exit on any floor shall not exceed 20 meters.</p> <p>Exit doorways shall not be less than 01 meters in width and not less than 02 meters in height.</p> <p>As per plan the staircases are proposed to be constructed with external wall.</p> <p>The staircases are required to be pressurized or provision of natural ventilation be made at each floor landing. The natural ventilation requirement of the staircases shall be achieved through opening at each landing of an area 0.5 m² in the external wall.</p> <p>Mechanism for pressurizing the staircase shall operate automatically with the fire alarm.</p> <p>The staircases shall be gained through automatic closing fire check doors of 02 hrs. rating.</p> <p>Door openings leading from upper floors to basement shall need to be protected with fire doors with 120 min. fire rating except for exit discharge doors from the basement.</p> <p>Staircases landing segregation and pressurization shall be provided for staircases in building those are proposed to communicate from ground to basement. Pressurization shall be done as per the provisions given in Clause-4.4.2.5 of Part-IV, NBCI-2016.</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 form a drought lobby.</p> <p>The exit sign with arrow indicating the way to the escape route shall be provided at all conspicuous places and shall be illuminated by electric light connected to corridor circuits.</p> <p>All landings of floor shall have floor indication boards indicating the number of floor.</p> <p>In addition to above all other provisions for exits/doorways/stairways/corridor shall be made as per Clause 4.2 to 4.6.2 of NBCI-2016 and Annexure-III of ODA (P&BS) Rules, 2020.</p>
G.	Lifts	<p>02 nos Lift in Block-A and 02 nos Lifts in Block-B have been proposed in the plan.</p> <p>Provision of lifts as proposed in the building satisfies the requirement as per Odisha Development Authorities (Planning and Building Standards) Rules, 2020.</p> <p>The capacities of lift shall not be less than 08 passenger's i.e 544 kg and at least 01 lift in every building block shall be a stretcher lift.</p> <p>Grounding switch at ground floor level shall be provided.</p> <p>Lift car door shall have a fire resistance rating of 01 Hr.</p> <p>Walls of lift enclosers shall have a fire rating of 02 (two) hrs. Lift shafts shall have vent at the top of area not less than 0.2 sqm.</p> <p>Telephone/talk back communication facilities may be provided in lift cars for communication system and lifts shall be connected to the fire control room of the building.</p> <p>Photo luminescent safety signs shall be posted and maintain on every floor at or near the lift indicating that in case of fire, occupants shall use the stairs unless instructed otherwise.</p> <p>In addition to above, other provisions of lift shall comply to the requirements as specified in Building</p>



		Services, Section 5 Installation of Lifts, Sub-Section 5-A Lifts of Part-8 of National Building Code of India, 2016, Regulations-42 and Annexure-III, IX of Odisha Development Authorities (Planning and Building Standards) Rules, 2020.
H.	Construction	<p>The minimum fire resistance ratings of structural and non-structural Elements (minute) 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>All floors shall be compartmented/zoned with area of each compartment being not more than 750 m² for the Building. Compartmentation of floors in the building shall be done as per the provisions given in clause 4.5 and Annexure-H of Part-IV, NBCI-2016.</p> <p>The structural safety design and construction of the building shall be done as per Clause-3.3 & 3.4 of NBCI-2016 and Odisha Development Authorities (Planning and Building Standards) Rules, 2020.</p> <p><u>Basement floor:-</u></p> <p>As shown in the plan there is provision of one ramp (for Block-B) of width 06 meter connectivity from basement to Stilt Floor.</p> <p>The width of Ramp shall not be less than 6 mtrs .</p> <p>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 confirm to the provisions given in Regulation-37(10), 41, Annexure-III of Odisha Development Authorities (Planning and Building Standards) Rules, 2020 and Clause-4.6.2, 4.2.19 & 4.4.2.4.3.5 of Part-4, NBCI-2016.</p> <p><u>Lightning Protection:-</u></p> <p>Provision for lightning protection shall be made in the proposed building as per NBCI-2016 and in corporate to relevant BIS specifications. Routing down of conductors (Insulated or Un-Insulated) of lightning protection shall not be made through electrical or other service shafts.</p> <p><u>Service Ducts and Shafts: -</u></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 specified in Clause 3.4.5.4 of NBCI-2016 and Odisha Development Authorities (Planning and Building Standards) Rules, 2020.</p>
I.	Building Services	<p><u>Electrical Services: -</u></p> <p>A stand-by electric 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.</p> <p>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 individuate control of the light points, if any.</p> <p>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.</p> <p>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.</p> <p>Transformer if housed in the building below the ground level shall be separated from the other portion of premises by Fire Resisting Walls of 4 hours rating.</p> <p>Electrical Installations in the building shall comply to the provisions given in Clause 3.4.6 to 3.4.7.4 of part-4 NBCI-2016 and Annexure-IV of Odisha Development Authority (Planning and Building Standards) Regulations,2020.</p> <p>Provision for lightning protection shall be made in the proposed building as per IS/IEC 62305-4:2010.</p>

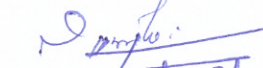


		<p>Air Conditioning: - Escape routes like staircases, common corridors, lift lobbies shall not be used as return air passage. Air ducts serving main floor areas, corridors, shall not pass through the staircase enclosure. The air-handling units shall be separate for each floor and air ducts for every 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 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. The Air Conditioning shall also be coupled with fire detection and alarm system. Metallic ducts shall be used even for the return air instead of space above the false ceiling. The materials used for insulating the duct system (inside or outside) shall be of non-combustible material. Air Conditioning system in the building shall comply to the provisions given in Clause 3.4.8 to 3.4.8.4.2 of part-4 NBCI-2016 and Annexure- IV of Odisha Development Authority (Planning and Building Standards) Regulations,2020.</p>
J.	Fixed Fire Fighting Installations	<p>The following fixed fire fighting installations are required to be provided as per NBCI-2016 and BIS specifications as mentioned against each.</p> <p>Fire Extinguisher: - Provision of fire extinguishers shall be made in both blocks and shall be in accordance to BIS: 2190:2010.</p> <p>First-aid Hose Reel: - The distribution of first-aid hose reel installation in the proposed buildings shall be so situated as not to be farther than 30 mtrs. From any point in the area covered and first-aid hose reels shall not be more than 50 mtrs. apart in horizontal. Installation of the First-Aid hose reel shall be in accordance to BIS 884:1985 & BIS 3844:1989.</p> <p>Down Comer: - Down Comer shall be provided in each floor of the Block-A & B. The distribution of down comer installation in the proposed building shall be so situated as not to be farther than 30 meters from any point in the area covered and shall not be more than 50 meters apart in horizontal. At each floor landing there shall be provision of hose box to accommodate 02 Nos. RRL Delivery Hoses of 15 meters length each of 63 mm dia and 01 no. branch pipe. Installation of down comer shall be in accordance to BIS 3844:1989.</p> <p>Automatic Sprinkler System: - Automatic water sprinkler system with sprinkler heads shall be provided only in basement floor of the building at suitable intervals and height in accordance to BIS specification 15105:2002 and 9972:2002.</p> <p>Manually Operated Electronic Fire Alarm System: - Manually Operated fire alarm system at conspicuous places in each floor of the both Block-A & B shall be provided Manually operated electric fire alarm system shall also include talk-back and Public Address System and shall be installation in accordance to IS/ISO 7240-11:2011.</p> <p>Terrace Tank: - Dedicated Terrace Tank for fire fighting purpose (Capacity-25,000 ltrs for Block-A & Capacity -25,000 ltrs for Block-B) shall be provided at the top of the building for fire fighting purpose. It should be ensured that water in the tank is not utilized for any other purpose other than fire fighting.</p> <p>Terrace Pump: - Provision of dedicated terrace pump (Capacity-900 LPM for Block-A & Capacity-900 LPM for Block-B) having connectivity to terrace tank and down comer pipes shall be made in the building.</p> <p>In addition to above, the requirement of additional water with independent electric pump of adequate capacity shall be made to the supplement water demand for the compartmentation.</p>
K.	Fire Command Centre	<p>➤ 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 in accordance with Clause-3.4.12 of Part-4, NBCI-2016.</p> <p>The applicant shall provide any additional fire requirements in future if the recommendation is issued by this department.</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: -

- i. The applicant shall produce a certificate to be issued by the person concerned to the effect that all the provisions of Bye-Laws / Regulations of Odisha Development Authority 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.

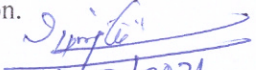

15/07/2021

(R. C Majhi)
Fire Officer (Principal),
OFDRA, Bhubaneswar
FIRE OFFICER (PRINCIPAL)
O.F.A.D.R.A. BHUBANESWAR.

Memo No: 1054 /FPW (OFDRA),

Dated-15.07.2021

Copy to Sri. Rajesh Kumar Nayak, Managing Director, M/s Laxmi Infra Venture Pvt. Ltd, Plot no-315, Saheed Nagar, Bhubaneswa-751007 for information & necessary action.


15/07/2021

Fire Officer (Principal),
OFDRA, Bhubaneswar
FIRE OFFICER (PRINCIPAL)
O.F.A.D.R.A. BHUBANESWAR.