



OFFICE OF THE FIRE OFFICER
CENTRAL RANGE, CUTTACK

FORM-II
[SEE RULE-12(5)]
FIRE SAFETY RECOMMENDATION

IX-3-A-312/2019

1. Address of the proposed building/premises :- Mouza-Nuahat, Dist-Cuttack
2. Name and Address of the applicant (s) :- Raj Kumar Mishra, Authorized Signatory, GM Infratech Limited, Plot No. N-4-157, IRC Village, Nayapalli, Bhubaneswar.
3. Date of receipt of application :- 14th July, 2020 Application with revised plan.
4. Proposed Occupancy (type of building) :- The proposed S+10 floors Block-A building and S+4 floors Block-B building is coming under "Residential building" as per Cuttack Development Authority (Planning and Building Standards) Regulation, 2017 & "Residential (Group-A, Sub Division A-4)" as per NBCI-2016.
5. Area with plot number and khata number :- Plot Area-6975.05 sqm.
Plot No.-1250, 1247/1984 & others.,
Khata No. 498/110, 498/320 & others,
Mouza-Nuahat, Dist-Cuttack.
6. Date of Inspection :- 7th January, 2020
7. Recommendation: -
The fire safety recommendation is as follows: -

A.	<p>Floor wise occupancy with area</p> <p>Block-A (As shown in the plan, 02 Nos. tower are proposed to be constructed over common stilt floor of Block-A)</p> <ul style="list-style-type: none"> ➤ Stilt floor- 2580.96 sqm Usage- Parking & Services. ➤ 1st floor- 1554.85 sqm Usage-Parking (Podium), Community Hall, Residential dwelling units. ➤ 2nd to 10th floor (Typical)- 1547.85 sqm each Usage- Residential dwelling units. ➤ Terrace floor- open to sky ➤ Total B.U.A- 18066.46 sqm <p>Block-B</p> <ul style="list-style-type: none"> ➤ Stilt floor- 349.08 sqm Usage- Parking & services ➤ 1st to 4th floor (Typical) - 346.64 sqm each Usage- Residential dwelling units. ➤ Terrace floor- open to sky ➤ Total B.U.A- 1735.64 sqm
B.	<p>Height</p> <p>Block-A (S+10 floors)= 33.15 mtr from ground level Block-B (S+4 floors)= 14.85 mtrs from ground level</p>
C.	<p>Parking</p> <ul style="list-style-type: none"> ➤ Provisions of stilt parking, podium parking on 1st floor level & open parking have been proposed in the plan. ➤ Required provision of parking shall be made in accordance to Regulation-32 of CDA (P&BS) Regulations, 2017. ➤ The parking space to be provided shall be in addition to the minimum setbacks as required under

		Regulation-29 of CDA (P&BS) Regulations, 2017.															
D.	Access to the building	<ul style="list-style-type: none"> ➤ Width of abutting Road or Means of Access proposed- 24 mtrs. ➤ <u>As shown in the plan width of the connecting road is 9.14 mtrs. But physically one canal bridge provided in between the abutting road to the proposed site which is less than the provision mentioned in the plan. The width of bridge required to be provided as per the plan and it should be minimum 45 ton load bearing capacity.</u> ➤ The main entrance to the plot shall not be less than 06 mtrs in width in order to allow easy access to fire engine. ➤ 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. ➤ As per the plan, the width of internal road proposed is 7.5 mtrs. ➤ The drive way shall be made hard surface capable of taking the mass of fire tender, weighing 45 ton minimum and the same shall be kept unbuilt. ➤ The 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. Besides, in no case, be included in the calculation of requirements pertaining to parking spaces. ➤ Provisions for access to the building as shown in the plan shall fulfill the requirement as per CDA (P&BS) Regulations, 2017. 															
E.	Setbacks (in mtrs.)	<ul style="list-style-type: none"> ➤ As per the approved plan, provision of the following setbacks have been proposed:- <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Block</th> <th>Front</th> <th>Rear</th> <th>Left</th> <th>Right</th> </tr> </thead> <tbody> <tr> <td>Block-A</td> <td>11 mtrs</td> <td>11 mtrs</td> <td>11.50 mtrs</td> <td>11.96 mtrs</td> </tr> <tr> <td>Block-B</td> <td>11 mtrs</td> <td>3.18 mtrs</td> <td>2.94 mtrs</td> <td>2.94 mtrs</td> </tr> </tbody> </table> <ul style="list-style-type: none"> ➤ As shown in the plan minimum 11 mtrs. open space is provided all around the building of Block-A as per requirement of CDA (P&BS) Regulations, 2017. ➤ As shown in the plan, minimum 06 mtrs. driveway between the towers of Block-A is provided at 1st floor level. ➤ As shown in the plan provision for driveway around the Block-A building is 7.5 mtrs. ➤ The covering slabs of underground water tank, soak pit, recharge tank, septic tank etc, which are proposed to be positioned in the compulsory open space must have appropriate load bearing capacity as per CDA (P&BS) Regulations, 2017. ➤ The 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. ➤ Besides, the entire specified compulsory open space area and driveway 7.5 mtrs shall be kept unbuilt and the driveway shall be constructed of hard surface capable of taking load of fire engine weighing up to 45 tons for easy access of fire engine as per CDA(P&BS) Regulations, 2017. Load bearing capacity certificate from the competent authority shall be obtained to that effect. ➤ Provision of setback required to be provided as per CDA (P&BS) Regulations, 2017. 	Block	Front	Rear	Left	Right	Block-A	11 mtrs	11 mtrs	11.50 mtrs	11.96 mtrs	Block-B	11 mtrs	3.18 mtrs	2.94 mtrs	2.94 mtrs
Block	Front	Rear	Left	Right													
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F.	Podium	<ul style="list-style-type: none"> ➤ As shown in the plan, there is provision of one Podium for Block-A building. The roof of the Podium shall have also load bearing capacity 45 ton minimum and load bearing capacity certificate from the competent authority shall be obtained to that effect. ➤ As shown in the plan there is provision of 01 No. Vehicle Ramp of width 06.12 mtrs for movement of fire tenders. ➤ Topmost podium slab which is open to sky may be landscaped, subject to provision of 1.6 mtrs parapet wall. ➤ Construction & Firefighting system shall be provided for the Podium as CDA(P&BS) Regulations, 2017 & NBCI-2016. 															

G.	Exits(Type, Number, Dimension & arrangement)	<ul style="list-style-type: none"> ➤ 01 No. vehicle ramp having width of 06.12 mtrs. have been proposed for entry and exit from the 1st floor podium parking. ➤ The provision of vehicle ramp shall be made as per CDA (P&BS) Regulations-2017. <p style="text-align: center;"><u>Block-A</u></p> <p>04 Nos. continuous staircases of one tower and 02 Nos. continuous staircase of another tower having connectivity from stilt to terrace have been shown in the plan. Width-1.25 mtrs, Tread-300 mm, Riser-150 mm</p> <p style="text-align: center;"><u>Block-B</u></p> <p>02 Nos. continuous staircases having connectivity from stilt to terrace have been shown in the plan but parameter of the staircases not mentioned in the plan.</p> <ul style="list-style-type: none"> ➤ <u>Parameter of staircases i.e width, tread & riser shall be provided as per CDA (P&BS) Regulations, 2017.</u> ➤ Travel distance shall be maintained as per CDA (P&BS) Regulations, 2017. ➤ No exit doorways shall be less than 01 mtr. in width and height less than 02 mtrs. ➤ As per plan the staircases are proposed to be constructed with external wall. ➤ 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. ➤ Mechanism for pressurizing the staircase shall operate automatically with the fire alarm. ➤ Access to main staircases be gained through automatic closing fire check doors of 02 hrs. rating. ➤ 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. ➤ 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. ➤ All landings of floor shall have floor indication boards indicating the number of floors. ➤ <u>In addition to above all other provisions for exits/doorways/stairways shall be made as per Clause 4.2 to 4.6.2 of NBCI-2016 and Annexure-IV of CDA (P&BS) Regulations, 2017.</u>
H.	Lifts	<ul style="list-style-type: none"> ➤ Provision of 02 Nos. lift for each tower of Block-A building having connectivity from stilt to top floor have been shown in the plan. ➤ Grounding switch at ground floor level shall be provided. ➤ Lift car door shall have a fire resistance rating of 01 Hr. ➤ 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; it shall be possible to operate this mechanically also. ➤ 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. ➤ The required fire safety measures in fire man lift shall be made as per Clause-7.1 of Part-8, Section-5 NBCI-2016 and as per Cuttack Development Authority (Planning and Building Standards) Regulations, 2017. ➤ 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. ➤ The lift lobbies shall be pressurized or cross-ventilated for buildings height more than 30 mtrs and naturally ventilated or pressurized for buildings height above 15 mtrs up to 30 mtrs as per

		<p>table- 6 and Clause -4.4.2.5 & E-2 of Part-IV, NBCI-2016.</p> <p>In addition to above, other provisions of lift shall comply to the requirements as specified in 'Building Services, Section 5 Installation of Lifts, Escalators and Moving Walks, Sub-Section 5 A Lifts of Part-8 of National Building Code of India, 2016 and Regulation-37 & Annexure-IV of CDA (P&BS) Regulations, 2017.</p>
I.	Firefighting Shaft (Fire Tower)	<ul style="list-style-type: none"> ➤ As shown in the plan there are provision of 02 Nos. firefighting shaft in one tower and 01 No. firefighting shaft in another tower of the proposed Block-A building. ➤ Provision of firefighting shaft shall comply to the requirements as specified in Clause-2.24 Part-4 of NBCI-2016 and as per CDA (P&BS) Regulations, 2017.
J.	Construction	<ul style="list-style-type: none"> ➤ All floors shall be compartmented/zoned with area of each compartment being not more than 750 m². ➤ The minimum fire resistance ratings of structural and non-structural members shall be as given in Table-1 of NBCI-2016. ➤ 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. ➤ The structural safety design and construction of the building shall be done as per Clause-3.3 & 3.4 of NBCI-2016 and Regulation-65 of CDA(P&BS) Regulations, 2017.
K.	Building Services	<p>Electrical Services: -</p> <ul style="list-style-type: none"> ➤ 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. ➤ 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 given in Clause 3.4.6 to 3.4.7.4 of part-4 NBCI-2016 and Annexure-IV of CDA(P&BS) Regulations, 2017 ➤ Provision for lightning protection shall be made in the proposed building as per IS/IEC 62305- 4:2010. <p>Air Conditioning: - If Central Air Conditioning system provided,</p> <ul style="list-style-type: none"> ➤ 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

		<p>perform for fire safety operation.</p> <ul style="list-style-type: none"> ➤ 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 as per CDA(P&BS) Regulations, 2017. <p><u>Service Ducts and Shafts:</u> -</p> <ul style="list-style-type: none"> ➤ — 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 as per CDA(P&BS) Regulations, 2017.
L.	Fixed Fire Fighting Installations	<p>The following fixed firefighting installations are required to be provided as per NBCI-2016 and BIS specifications as mentioned against each.</p> <ol style="list-style-type: none"> i. Fire Extinguisher: - Provision of fire extinguishers shall be made in all buildings. (BIS:2190:2010) ii. First-aid Hose Reel: - First-aid hose reel shall be provided on each floor of all buildings/towers. (BIS 884:1985 & BIS 3844:1989) iii. Down Comer: - Down Comer shall be provided in each floor of all towers of Block-A building. 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 Nos. branch pipe. (BIS 3844:1989) iv. Manually Operated Electronic Fire Alarm System: - Manually Operated Electronic fire alarm system at conspicuous places in each floor of all towers of the Block-A building shall be provided. Manually operated electronic fire alarm system shall also include talk-back and Public Address System. (IS/ISO 7240-11:2011) v. Terrace Tank: - Terrace Tank of 25,000 ltrs. Capacity shall be provided at the top of each tower of Block-A building and 5,000 ltrs. Capacity shall be provided at the top of the Block-B building for firefighting purpose. It should be ensured that water in the tank is not utilized for any other purpose other than firefighting. vi. Terrace Pump: - Provision of terrace pump of 900 lpm. capacity for each tower of Block-A building and 450 lpm capacity for Block-B building having connectivity to terrace tank shall be made in the building.
M.	Fire Command Centre	<p>There shall be a Fire Command Centre on entrance floor of Block-A 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 owner/occupier shall provide any additional fire requirements in future if the recommendation is issued by this department.</p>
N.	If provision for Gas Bank available	<ul style="list-style-type: none"> ➤ Construction and provision of fire safety measures and firefighting measures shall be of IS-6044 of 2000.

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 read with Odisha Fire Prevention and Fire Safety (Amendment) Rules, 2019 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 Cuttack Development Authority, Cuttack 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 have been done as recommended and as per provision given in part-4 of National Building Code of India-2016 and relevant BIS Specifications.

Bllh
21/7/2020
Fire Officer
Central Range, Cuttack

Memo No. 1087 /CR-FPS

Date. 21.07.2020

Copy to the Authorized Signatory, GM Infratech Ltd, Plot No. N/4-157, IRC Village, Nayapalli, Bhubaneswar for information and necessary action with reference to your letter No. Nil Dt. 13.07.2020 on requisition for revision of Fire Safety Recommendation. The Fire Safety Recommendation issued earlier from this office vide memo No. 554/CR-FPS Dt. 20.01.2020 is stands cancelled.

Bllh
21/7/2020
Fire Officer
Central Range, Cuttack

Memo No. _____ /CR-FPS

Date. 21.07.2020

Copy to Planning Member, Cuttack Development Authority, Cuttack for information and necessary action. The Fire Safety Recommendation issued earlier from this office vide memo No. 555/CR-FPS Dt. 20.01.2020 is stands cancelled.

Sd/-
Fire Officer,
Central Range, Cuttack.

Memo No. _____ /CR-FPS

Date. 21.07.2020

Copy submitted to the Chief Fire Officer, Fire Prevention Wing, Odisha, Cuttack for kind information please with reference to this office memo No. 556/CR-FPS Dt. 20.01.2020.

Sd/-
Fire Officer,
Central Range, Cuttack.