



Date: 01.12.2024

To,
Ministry of Environment, Forests & Climate Change,
Integrated Regional Offices,
Ground Floor, East Wing, New Secretariat Building,
Civil Lines, Nagpur – 440 001, Maharashtra.

Subject : Submission of Half yearly compliance report **December 2024** for our proposed commercial project at Plot No. D-107, TTC Industrial area, Shiravane, Nerul, Navi Mumbai.

Reference : Environmental Clearance vide letter no. SEIAA-EC-0000002078, Dated 10.11.2019.

Respected Sir,

With reference to the above-mentioned subject and as per the condition stated in Environmental Clearance Letter, we would like to submit the **Half yearly compliance report for December- 2024 along with monitoring reports** after receipt of Environmental Clearance for the above-mentioned site.

We are hereby enclosing our Compliance report copy of **December- 2024** along with the duly filled Data Sheet and annexures for your reference.

Thanking you.

Yours Sincerely,
For, M/s. Greenscape Realty

Partner



Cc: Member Secretary, SEIAA, Maharashtra.

Greenscape Realty
1908, Cyber One, Plot No. 4 & 6, Sector 30A,
Behind Odisha Bhavan, Vashi, Navi Mumbai 400 703.
Tel: 022 2087 2233/2244/2255.
www.greenscapedgroup.co.in

	1. Specific Conditions	Status
I.	PP informed that there is change in online CS with respect to date of approval of plan. PP to revise the same online also.	We have uploaded the revise CS on http://www.ecmpcb.in/ portal and kindly refer revised CS in Enclosure No. 01.
II.	As shown during the presentation, PP to upload the Layout showing location of services including environmental infrastructure on the website immediately. PP to produce the same to SEIAA.	We have uploaded the utility plan on http://www.ecmpcb.in/ portal and kindly refer Enclosure No. 02 for utilities plan.
III.	PP to ensure that, E-waste management should be as per E-waste management rule, 2016	PP has ensured that E-waste management shall be done as per E-waste management rule, 2016 and has also identified MPCB authorized e-waste recyclers in MIDC namely, M/s. Eco Friends Industries and M/s. TTCWMA. Please refer undertaking for E- waste management in Enclosure No. 03.
IV.	PP to increase the solar energy saving from 1.5 % to 4%.	We have increased the solar energy savings from 1.5% to 4.02 % and please refer Enclosure No. 04 for energy saving calculation and solar panel layout.
V.	PP to provide Fire hydrants along with necessary equipment on top of the podium and separate stair case which go direct to the podium for fire man.	We have revised the plan showing fire hydrants along with necessary equipment on the top of the podium and a separate staircase going directly to the podium for fireman and Kindly refer Enclosure No. 05 for Master, Podium Floor plans and Firefighting plan.
VI.	PP to abide the all conditions of CFO NoC.	We have received the Provisional Fire NOC from MIDC vide no. MIDC/Fire/B-32610 dated 12.04.2019 and we will abide the all conditions of CFO NoC. Please refer Enclosure No. 06 for CFO NoC.
VII.	The PP to get NOC from competent authority with reference to Thane creek flamingo sanctuary if the project site falls within 10 Km radius from the said sanctuary boundary. The planning authority to ensure fulfilment of this condition before granting CC.	Not Applicable.
VIII.	PP to submit CER (as per green field) prescribed by MoEF&CC circular dated 1.5.2018 relevant to the area and people around the project. The specific activities to be undertaken under CER to be carried out in consultation with Municipal Corporation or collector or Environment Department.	Not Applicable as per MoEF&CC OM F. No. 22-65/2017-IA.III dated 30.09.2020.
IX.	PP to ensure that CER plan get approved from Municipal Commissioner/District Collector.	Not Applicable as per MoEF&CC OM F. No. 22-65/2017-IA.III dated 30.09.2020.

X.	PP Shall comply with Standard EC conditions mentioned in the Office Memorandum issued by MoEF & CC vide F.No.22-34/2018-IA.III dt.04.01.2019.	Noted and we will comply the same.
XI.	SEIAA decided to grant EC for –FSI:16170.900 m2, Non-FSI:25567.676 m2 and Total BUA: 41738.576 m2 (Plan Approval no-EE/DN.11/MHP/SPA/B41403/2019, Date-24.04.2019)	Noted.
	2. General Condition	
I.	E-waste shall be disposed through Authorized vendor as per E-waste (Management and Handling) Rules, 2016.	Noted and we will comply the same.
II.	The Occupancy Certificate shall be issued by the Local Planning Authority to the project only after ensuring sustained availability of drinking water, connectivity of sewer line to the project site and proper disposal of treated water as per environmental norms.	Noted & agreed to.
III.	This environmental clearance is issued subject to obtaining NOC from Forestry & Wild life angle including clearance from the standing committee of the National Board for Wild life as if applicable & this environment clearance does not necessarily imply that Forestry & Wild life clearance granted to the project which will be considered separately on merit.	The project is not located in the forest area hence NOC from Forestry and wild life angle is not applicable.
IV.	PP has to abide by the conditions stipulated by SEAC & SEIAA.	Noted.
V.	The height, Construction built up area of proposed construction shall be in accordance with the existing FSI/FAR norms of the urban local body & it should ensure the same along with survey number before approving layout plan & before according commencement certificate to proposed work. Plan approving authority should also ensure the zoning permissibility for the proposed project as per the approved development plan of the area.	The height of the construction built up area is in accordance with the FSI/FAR norms. Please Refer Enclosure No. 07 for Commencement Certificate to start the work.
VI.	If applicable Consent for Establishment shall be obtained from Maharashtra Pollution Control Board under Air and Water Act and a copy shall be submitted to the Environment department before start of any construction work at the site.	Noted and please refer Enclosure No. 08 for Consent to Establish copy.
VII.	All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase.	Adequate number of Temporary toilets with septic tank and soak pits along with the on- site water supply & sanitation facilities are provided during the construction phase. Details are provided in Enclosure No. 09.

VIII.	Adequate drinking water and sanitary facilities should be provided for construction workers at the site. Provision should be made for mobile toilets. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.	Drinking water is being stored in a clean separate tank to avoid contamination. The waste generated from the labor camps (mostly household waste) will be collected and disposed off in municipal bins.
IX.	The solid waste generated should be properly collected and segregated. Dry/ inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material.	The solid waste will be collected & segregated into wet & dry waste and supplied through authorized vendors. Please refer Enclosure No. 10 for solid waste management and Enclosure No. 02 location of OWC.
X.	Disposal of muck during construction phase should not create any adverse effect on the neighboring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.	Re-utilization & recycling strategy for construction debris is being followed. Recycled aggregates are sold to the recycle dealer.
XI.	Arrangement shall be made that waste water and storm water do not get mixed.	Designing of separate pipeline for waste water & laying of separate drain line for storm water is proposed in the project.
XII.	All the topsoil excavated during construction activities should be stored for use in horticulture / landscape development within the project site.	Excavated soil used for backfilling and leveling of the plot & remaining shall be used within site for landscaping.
XIII.	Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.	Excavated soil used for backfilling and leveling of the plot & remaining shall be used within site for landscaping.
XIV.	Green Belt Development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/ Agriculture Dept.	The landscape will be developed considering CPCB guidelines. Local tree species will be used for plantation. Refer Enclosure No. 11 for Landscape plan and details.
XV.	Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.	The construction process does not involve any activity which may lead to leaching of heavy metals and toxic contaminants. Hence, there is no threat of contamination to sub-soil and ground water. Monitoring reports are enclosed as Enclosure No. 12.
XVI.	Construction spoils, including bituminous material and other hazardous materials must not be allowed to contaminate watercourses and the dumpsites for such material must be secured so that they should not leach into the ground water.	There is no bituminous waste. All precautions are taken to prevent contamination of water sources. The construction process does not involve storage of hazardous material to be consumed in building construction works.
XVII.	Any hazardous waste generated during construction phase should be disposed off as per applicable rules and norms with necessary approvals of the Maharashtra Pollution Control Board.	Negligible quantities of oil spillage from construction machineries & vehicles.

XVIII.	The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environments (Protection) Rules prescribed for air and noise emission standards.	D.G. Sets will be operated only in case of power failures during operational phase. We have provided DG set which is of enclosed type & confirms to EPA standard.
XIX.	The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from concern authority shall be taken.	Diesel will not be stored on site.
XX.	Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.	Regular maintenance of construction vehicles will be carried out to keep them in good condition. Adequate parking space has been provided for construction vehicles inside the construction premises to lessen the impact on traffic in surrounding areas.
XXI.	Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/MPCB.	During construction adequate measures are taken to maintain air quality and noise levels within the prescribed limits. Dust suppression of fugitive dust arising mainly due to transportation of construction material is being carried out by water sprinkling. The vehicles hired by the contractor for construction purpose are checked for valid PUC Certificate. Ambient air and noise level monitoring is being carried out during the construction phase to ensure that the ambient air quality and noise levels are within the prescribed limits. The ambient air quality and noise levels during the construction phase is given as Enclosure No. 12.
XXII.	Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September 1999 and amended as on 27th August, 2003. (The above condition is applicable only if the project site is located within the 100Km of Thermal Power Stations).	We are using ash-based material for building construction.
XXIII.	Ready mixed concrete must be used in building construction.	Noted.
XXIV.	Storm water control and its re-use as per CGWB and BIS standards for various applications.	Strom water control and its reuse will be as per Central ground water board and BIS standards. Refer Enclosure No. 13 for RWH tank details.
XXV.	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.	Water demand during construction phase reduced by use of pre-mixed concrete and curing agents.

XXVI.	The ground water level and its quality should be monitored regularly in consultation with Ground Water Authority.	Noted. Refer Enclosure No. 12 for Monitoring Reports.
XXVII.	The installation of the Sewage Treatment Plant (STP) should be certified by an independent expert and a report in this regard should be submitted to the MPCB and Environment department before the project is commissioned for operation. Discharge of this unused treated affluent, if any should be discharge in the sewer line. Treated effluent emanating from STP shall be recycled/ refused to the maximum extent possible. Discharge of this unused treated affluent, if any should be discharge in the sewer line. Treatment of 100% gray water by decentralized treatment should be done. Necessary measures should be made to mitigate the odour problem from STP.	STP will be certified by independent expert and same will be commissioned after due approval from MPCB. The 100% treatment will be done and treated sewage will be used for gardening, car washing and flushing purpose. Excess will be drained into existing sewer line and will conform to the norms of MPCB, also Activated carbon filter and sand filter will be given to take care of odour problem. For Sewage Treatment Plant, please refer Enclosure No. 02 for location of STP.
XXVIII.	Permission to draw ground water and construction of basement if any shall be obtained from the competent Authority prior to construction/operation of the project.	No Extraction of Ground water.
XXIX.	Separation of gray and black water should be done by the use of dual plumbing line for separation of gray and black water.	We have proposed use of dual pumping line for separation of black & grey water.
XXX.	Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor-based control.	Yes. Low pressure water fixtures are proposed.
XXXI.	Use of glass may be reduced up to 40% to reduce the electricity consumption and load on air conditioning. If necessary, use high quality double glass with special reflective coating in windows.	We shall use double glazed glass for window and glazing especially where sun exposure is maximum.
XXXII.	Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirement.	We shall use appropriate thermal insulation material to fulfill the prescriptive requirement as per energy conservation building code.
XXXIII.	Energy conservation measures like installation of CFLs /TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Use CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the extent possible like installing solar street lights, common solar water heaters system. Project Proponent should install, after checking feasibility,	For energy conservation we have proposed use of CFL lamps. Solar Street light is proposed in areas such as open spaces, pathways, RG etc. Please refer Enclosure No. 04 for Energy Conservation measures.

	solar plus hybrid non-conventional energy source as source of energy.	
XXXIV.	Diesel power generating sets proposed as source of backup power for elevators and common area illumination during operation phase should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use low sulphur diesel. The location of the DG sets may be decided with in consultation with Maharashtra Pollution Control Board.	We will be using DG set during construction & operational phase for backup power source and Acoustic enclosure type will be used.
XXXV.	Noise should be controlled to ensure that it does not exceed the prescribed standards. During nighttime the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.	There is boundary wall and trees will be planted on RG area. This will act as noise barriers. All precautions will be taken to control the noise level during day and night. Noise levels will be monitored be within the prescribed during the operation phase to ascertain the noise levels. For details, please refer Enclosure No. 11 for landscape plan and details.
XXXVI.	Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.	Public road and public area are not being used for project activity purpose and are free from smooth traffic movement. Provisions are made for adequate parking facilities within the project complex and no public space will be used for parking of vehicles.
XXXVII.	Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code, which is proposed to be mandatory for all air-conditioned spaces while it is aspiration for non-air-conditioned spaces by use of appropriate thermal insulation material to fulfill requirement.	We will comply with the same. For Energy Conservation Measures Refer Enclosure No. 04.
XXXVIII.	The building should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.	We will provide enough distance between the buildings, for easy movement of air and passage of natural light.
XXXIX.	Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings.	Yes. We have defined EMP Cell to take care of regular monitoring and implementation of EMP. The Environmental Monitoring Plan is attached as Enclosure No. 14.
XL.	Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it was found that construction of the	We have received Environment Clearance. The copy of Environment Clearance is attached as

	project has been started without obtaining environmental clearance.	Enclosure No. 15.
XLI.	Six monthly monitoring reports should be submitted to the Regional office MoEF, Bhopal with copy to this department and MPCB.	December 2024 Monitoring report is attached herewith.
XLII.	Project proponent shall ensure completion of STP, MSW disposal facility, green belt development prior to occupation of the buildings. As agreed during the SEIAA meeting, PP to explore possibility of utilizing excess treated water in the adjacent area for gardening before discharging it into sewer line No physical occupation or allotment will be given unless all above said environmental infrastructure is installed and made functional including water requirement in Para 2. Prior certification from appropriate authority shall be obtained.	Noted. We will install STP of 90 m ³ /day. Organic waste converter for wet garbage will be provided while dry garbage will be recycled via authorized dealer.
XLIII.	Wet garbage should be treated by Organic Waste Converter and treated waste (manure) should be utilized in the existing premises for gardening. And, no wet garbage will be disposed outside the premises. Local authority should ensure this.	The solid waste generated is being properly collected & segregated. Wet garbage will be composted by organic waste converter technology & manure will be used in landscape development. Refer Enclosure No. 11 for solid waste management and Enclosure No. 02 for details of Organic Waste Converter.
XLIV.	Local body should ensure that no occupation certification is issued prior to operation of STP/MSW site etc. with due permission of MPCB.	Yes. Noted and agreed to all due approvals will be taken from MPCB and planning authority before occupation.
XLV.	A complete set of all the documents submitted to Department should be forwarded to the Local authority and MPCB.	We have submitted the all required documents to the Local authority and Maharashtra Pollution Control Board.
XLVI.	In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Department.	Noted.
XLVII.	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	Yes. We will provide the same. Refer Environment Management Cell structure enclosed as Enclosure No. 15.
XLVIII.	Separate funds shall be allocated for implementation of environmental protection measures/EMP along with item-wise breaks-up. This cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should report to the	Noted.

	MPCB & this department.	
XLIX.	The project management shall advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the Marathi language of the local concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the Maharashtra Pollution Control Board and may also be seen at Website at http://ec.maharashtra.gov.in .	Noted and given. Please refer Enclosure No. 16 for advertisement in newspaper.
L.	Project management should submit half yearly compliance reports in respect of the stipulated prior environment clearance terms and conditions in hard & soft copies to the MPCB & this department, on 1 st June & 1 st December of each calendar year.	Yes. This is our December 2024 Environmental Monitoring Report.
LI.	A copy of the clearance letter shall be sent by proponent to the concerned Municipal Corporation and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	Noted.
LII.	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM. SO ₂ , Nox (ambient levels as well as stack emissions) or critical sector parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Noted.
LIII.	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	As per EC conditions we are submitting six monthly Compliance report. Refer Enclosure No. 12 for monitoring Reports carried out by MoEF recognized Laboratory.
LIV.	The environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on	Noted and agreed too.

	the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.	
4.	The environmental clearance is being issued without prejudice to the action initiated under EP Act or any court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision under EP Act or of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him, if any or action initiated under EP Act.	Noted.
5.	In case of submission of false document and non-compliance of stipulated conditions, Authority/ Environment Department will revoke or suspend the Environment clearance without any intimation and initiate appropriate legal action under Environmental Protection Act, 1986.	Noted.
6.	The Environment department reserves the right to add any stringent condition or to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the department or for that matter, for any other administrative reason.	Noted.
7.	Validity of Environment Clearance: The environmental clearance accorded shall be valid as per EIA Notification, 2006, and amendments by MoEF&CC Notification dated 29 th April, 2015.	Noted.
8.	In case of any deviation or alteration in the project proposed from those submitted to this department for clearance, a fresh reference should be made to the department to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.	Noted and agreed to.
9.	The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.	Noted.
10.	Any appeal against this Environment clearance shall lie with the National Green Tribunal (Western Zone Bench, Pune), New Administrative Building, 1stFloor, D-, Wing, Opposite Council Hall, Pune, if preferred,	Noted.

	within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	
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ENCLOSURE LIST

Enclosure No.	:	Details
1.	:	Revised CS uploaded http://www.ecmpcb.in/
2.	:	Utilities Plan
3.	:	E- Waste Management Undertaking
4.	:	Energy saving calculation and solar panel layout
5.	:	Master, Podium Floor and Fire Frightening Plans
6.	:	Provisional CFO NoC
7.	:	Commencement certificate copy
8.	:	Consent to Establish copy
9.	:	Sanitary and Hygiene measures
10.	:	Solid Waste Management
11.	:	Location of Utilities
12.	:	Monitoring Reports
13.	:	RWH tank details
14.	:	Environment Management Plan
15.	:	Environment Clearance copy
16.	:	Environment Management Cell
17.	:	Advertisement in regional news papers
18.	:	Site Photographs
19.	:	Data Sheet with Annexures A & B

Enclosure No. 01: Revised Consolidated Statement Uploaded <http://www.ecmpcb.in/> portal

CONSOLIDATED STATEMENT: SEIAA-STATEMENT-0000003195			
Subject: Environment Clearance for Environment Clearance for Proposed Commercial IT Building development at Plot No. D-107, TTC Industrial area, Shiravane, Nerul, Navi Mumbai.			
Is a Violation Case: No			
1.Name of Project	Proposed Commercial IT Building Development		
2.Type of institution	Private		
3.Name of Project Proponent	Greenscape Realty		
4.Name of Consultant	Building Environment (I) Pvt. Ltd.		
5.Type of project	Commercial IT Building Development		
6.New project/expansion in existing project/modernization/diversification in existing project	New Project		
7.If expansion/diversification, whether environmental clearance has been obtained for existing project	Not applicable		
8.Location of the project	Plot No. D-107, TTC Industrial area, Shiravane, Nerul, Navi Mumbai.		
9.Taluka	Thane		
10.Village	--		
Correspondence Name:	Jayesh Patel (Partner)		
Room Number:	1908		
Floor:	19		
Building Name:	Cyber One		
Road/Street Name:	--		
Locality:	Sector-30A, Behind Odisha Bhavan, Vashi,		
City:	Navi Mumbai		
11.Whether in Corporation / Municipal / other area	MIDC		
12.IOD/IOA/Concession/Plan Approval Number	Commencement Certificate IOD/IOA/Concession/Plan Approval Number: Commencement Certificate received: MIDC No.EE/DN.II/MHP/SPA/ B41403/of 2019; Dated- 24/04/2019 Approved Built-up Area: 41738.576		
13.Note on the initiated work (If applicable)	NA		
14.LOI / NOC / IOD from MHADA/ Other approvals (If applicable)	Commencement Certificate		
15.Total Plot Area (sq. m.)	5400.00		
16.Deductions	Nil		
17.Net Plot area	5400.00		
18 (a).Proposed Built-up area (FSI & Non-FSI)	FSI area (sq. m.): 16170.900 Non FSI area (sq. m.): 25567.676 Total BUA area (sq. m.): 41738.576		
18 (b).Approved Built up area as per DCR	Approved FSI area (sq. m.): 16170.900 Approved Non FSI area (sq. m.): 25567.676 Date of Approval: 24/04/2019		
19.Total ground coverage (m2)	2709.60		
20.Ground-coverage Percentage (%) (Note: Percentage of plot not open to sky)	50.18 %		
21.Estimated cost of the project	847500000		
22.Number of buildings & its configuration			
Serial number	Building Name & number	Number of floors	Height of the building (Mtrs)
1	1 Building with 1 wing	Ground + 1st to 5th Floor Parking podiums + 6th Floor Landscape podium + 7th to 25th Floors	94.55 Meters
SEIAA-STATEMENT-0000003195			Page 1 of 12

23.Number of tenants and shops	No. of Shops- 08 No. of Offices- 175
24.Number of expected residents / users	Shops: 180 Persons, Offices: 1687 Persons, Visitors (15%): 280 Persons
25.Tenant density per hectare	338.90
26.Height of the building(s)	94.55 Meters
27.Right of way (Width of the road from the nearest fire station to the proposed building(s))	24.50 Meters
28.Turning radius for easy access of fire tender movement from all around the building excluding the width for the plantation	09 Meters
29.Existing structure (s) if any	Yes , Godown
30.Details of the demolition with disposal (If applicable)	Demolition structure volume:10775 Cu. M. (demolished metal will be used for fencing and debris will be used for refilling at site)

31.Production Details

Serial Number	Product	Existing (MT/M)	Proposed (MT/M)	Total (MT/M)
1	Not applicable	Not applicable	Not applicable	Not applicable

32.Total Water Requirement

Dry season:	Source of water	MIDC + STP treated water		
	Fresh water (CMD):	39.00		
	Recycled water - Flushing (CMD):	50.00		
	Recycled water - Gardening (CMD):	11.00		
	Swimming pool make up (Cum):	NA		
	Total Water Requirement (CMD):	100.00		
	:			
	Fire fighting - Underground water tank(CMD):	200.00		
	Fire fighting - Overhead water tank(CMD):	30.00		
	Excess treated water	12.00		

Wet season:	Source of water	MIDC + RWH + STP treated water
	Fresh water (CMD):	5.71 (MIDC) + 33.29 (RWH) = 39.00
	Recycled water - Flushing (CMD):	50.00
	Recycled water - Gardening (CMD):	0.00
	Swimming pool make up (Cum):	NA
	Total Water Requirement (CMD) :	89.00
	Fire fighting - Underground water tank(CMD):	200.00
	Fire fighting - Overhead water tank(CMD):	30.00
	Excess treated water	23.00
	Details of Swimming pool (If any)	NA

33.Details of Total water consumed									
Particulars	Consumption (CMD)			Loss (CMD)			Effluent (CMD)		
Water Requirement	Existing	Proposed	Total	Existing	Proposed	Total	Existing	Proposed	Total
Domestic	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
34.Rain Water Harvesting (RWH)	Level of the Ground water table:		2.5 Meters						
	Size and no of RWH tank(s) and Quantity:		1 RWH tank of 35 KLD						
	Location of the RWH tank(s):		On Ground						
	Quantity of recharge pits:		NA						
	Size of recharge pits :		NA						
	Budgetary allocation (Capital cost) :		4.00 Lacs						
	Budgetary allocation (O & M cost) :		1.00 Lacs/ Year						
	Details of UGT tanks if any :		U/G Tank for Domestic Water Supply- 44,000 litres U/G Tank for Flushing Water Supply- 54,000 litres						
35.Storm water drainage	Natural water drainage pattern:		The storm drainage above ground will essentially cater for the seasonal rains. The major part of discharge will be from the roof. Rain water outlets will be provided at the edges from where it will be carried down by UPVC agriculture pipes to discharge water into storm water entrance chambers below ground. Dewatering submersible pumps inside the sumps will pump water from the sumps to storm water entrance chambers outside the basement below the ground. Run- off from the ground and terrace will b						
	Quantity of storm water:		0.13 cum/sec						
	Size of SWD:		0.45 x 0.6 m						
36.Sewage and Waste water	Sewage generation in KLD:		80 KLD						
	STP technology:		Microfiltration technology based on KSQ Flat sheet membrane						
	Capacity of STP (CMD):		1 STP of 90 KLD						
	Location & area of the STP:		On ground and area 72 Sq. Mtrs.						
	Budgetary allocation (Capital cost):		10 Lacs						
	Budgetary allocation (O & M cost):		4 Lacs/Year						

37.Solid waste Management					
Waste generation in the Pre Construction and Construction phase:	Waste generation:	Excavated soil will be used in land leveling purpose & construction debris will be handed over to authorized agency.			
	Disposal of the construction waste debris:	Construction debris will be handed over to Authorized agency.			
Waste generation in the operation Phase:	Dry waste:	327.17 Kg/day			
	Wet waste:	218.11 Kg/day			
	Hazardous waste:	NA			
	Biomedical waste (If applicable):	NA			
	STP Sludge (Dry sludge):	2.25 Kg/day			
	Others if any:	NA			
Mode of Disposal of waste:	Dry waste:	Dry waste will be handed over to authorize agency.			
	Wet waste:	Composting through OWC & used at site as manure.			
	Hazardous waste:	NA			
	Biomedical waste (If applicable):	NA			
	STP Sludge (Dry sludge):	Used as manure within the premises for plants. Excess shall be sold /handover to outside parties or gardens.			
	Others if any:	E-waste (approx. 3 T/Year)			
Area requirement:	Location(s):	On ground			
	Area for the storage of waste & other material:	30 Sq. Mt.			
	Area for machinery:	30 Sq. Mt.			
Budgetary allocation (Capital cost and O&M cost):	Capital cost:	7.50 Lacs			
	O & M cost:	3.50 Lacs/ Year			
38.Effluent Charecterestics					
Serial Number	Parameters	Unit	Inlet Effluent Charecterestics	Outlet Effluent Charecterestics	Effluent discharge standards (MPCB)
1	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Amount of effluent generation (CMD):		Not applicable			
Capacity of the TP:		Not applicable			
Amount of treated effluent recycled :		Not applicable			
Amount of water send to the CETP:		Not applicable			
Membership of CETP (if require):		Not applicable			
Note on ETP technology to be used		Not applicable			
Disposal of the ETP sludge		Not applicable			

39.Hazardous Waste Details							
Serial Number	Description	Cat	UOM	Existing	Proposed	Total	Method of Disposal
1	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

40.Stacks emission Details						
Serial Number	Section & units	Fuel Used with Quantity	Stack No.	Height from ground level (m)	Internal diameter (m)	Temp. of Exhaust Gases
1	--	High Speed Diesel ;Fuel Consumption :- @75% Load – 99Ltrs/Hour @100% Load – 132Ltrs/Hour Fuel Tank Capacity :- 990 Ltrs	--	3.42	0.3	--

41.Details of Fuel to be used				
Serial Number	Type of Fuel	Existing	Proposed	Total
1	Not applicable	Not applicable	Not applicable	Not applicable

42.Source of Fuel	Not applicable
43.Mode of Transportation of fuel to site	Not applicable

44.Green Belt Development	Total RG area :	Total RG area: 2095.504 Sq. Mt. (RG area on Ground: 565.504 Sq. Mt. and on 6th Floor Podium: 1530.00 Sq. Mt.)
	No of trees to be cut :	Existing Trees: 18 Nos. (No. of Trees proposed for felling: 1 No.; No. of Trees to be transplant: 07 Nos. & No. of trees to be retained: 10 Nos.)
	Number of trees to be planted :	94 Nos.
	List of proposed native trees :	As mentioned below
	Timeline for completion of plantation :	5 Years

45.Number and list of trees species to be planted in the ground				
Serial Number	Name of the plant	Common Name	Quantity	Characteristics & ecological importance
1	Citrus sp.	Lemon	20	Butterfly host plant having high Air Pollution Index Tolerance (APIT) tree, small white fragrant flowers.
2	Nyctanthes arbor-tristis	Parijataak	14	Small deciduous fast growing tree, beautiful flowers
3	Cassia fistula	Bahava	10	Medium sized deciduous tree Beautiful yellow flowers, Butterfly host plant
4	Bauhiniaracemosa	Apta	10	Small tree with small white flowers, Butterfly host plant
5	Saraca asoka	Sita Asoka	10	Shady tree with Red-Yellow Flowers
6	Polyalthia longifolia	False Asoka	10	Med. Tree having high Air Pollution Index Tolerance (APIT)
7	Areca sp.	Palm	10	Ornamental
8	Michellia champaca	Soanchaffa	10	Ornamental

SEIAA-STATEMENT-0000003195				Page 6 of 12
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46.Total quantity of plants on ground		94	
47.Number and list of shrubs and bushes species to be planted in the podium RG:			
Serial Number	Name	C/C Distance	Area m2
1	Nirgudi, Adulsa, White Plumbago, Ber , Stachytarpheta, Takala, Tarwad, Krushna Kamal	--	1530.00 Sq. Mt.

48. Energy			
Power requirement:	Source of power supply :	MSDCL	
	During Construction Phase: (Demand Load)	100 kW	
	DG set as Power back-up during construction phase	100 kVA	
	During Operation phase (Connected load):	2174 kW	
	During Operation phase (Demand load):	1739 kW	
	Transformer:	1000 kVA x 3 nos.	
	DG set as Power back-up during operation phase:	600 kVA	
	Fuel used:	HSD	
Details of high tension line passing through the plot if any:	NA		
49. Energy saving by non-conventional method:			
Reduction in consumption by using Energy Saving Measure: 1. LED Light for Offices 2. LED Lights for Lift Lobby passage and Staircase 3. Saving in lift by using VFD 4. Solar Lighting for External Lighting 5. Solar Power for Lift Lobby passage and Staircase Lighting 6. Solar Power for Parking Lights			
50. Detail calculations & % of saving:			
Serial Number	Energy Conservation Measures	Saving %	
1	Annual saving only by Solar	7.5 %	
2	Total Annual Saving	22 %	
51. Details of pollution control Systems			
Source	Existing pollution control system	Proposed to be installed	
Not applicable	Not applicable	Not applicable	
Budgetary allocation (Capital cost and O&M cost):	Capital cost:	25.00 Lacs	
	O & M cost:	1.00 Lacs/ Year	
52. Environmental Management plan Budgetary Allocation			
a) Construction phase (with Break-up):			
Serial Number	Attributes	Parameter	Total Cost per annum (Rs. In Lacs)
1	PPE	--	5.00
2	Site Sanitation Facility	--	4.00
3	Drinking water Facility	--	2.00

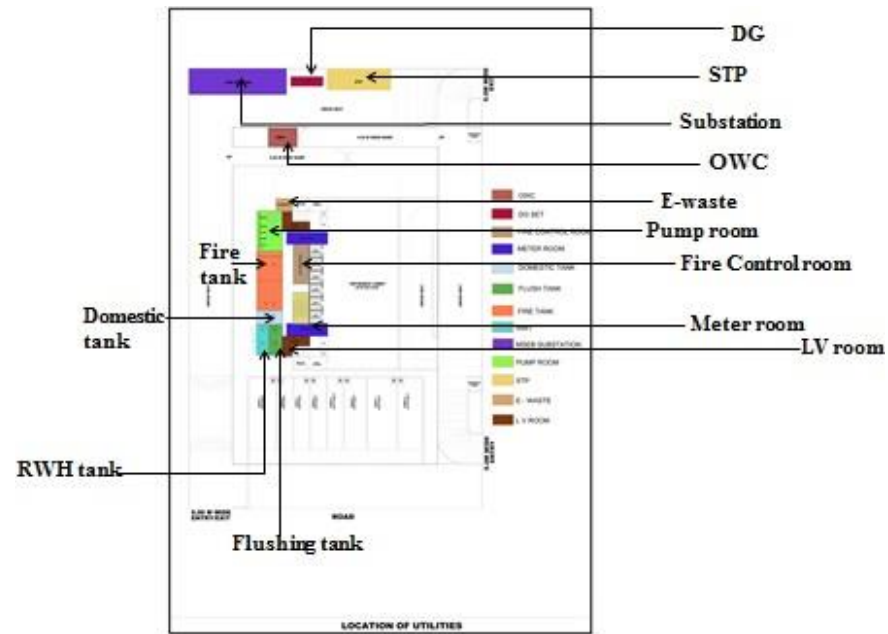
4	Solid Waste Management	--	2.50
5	Safety railing, platform, ladder, crane, hoist etc.	--	6.00
6	House Keeping	--	2.00
7	Health check	--	1.00
8	Environmental Monitoring	--	1.50
9	Anti rust coating on foundation steel bars	--	5.00

b) Operation Phase (with Break-up):							
Serial Number	Component	Description	Capital cost Rs. In Lacs	Operational and Maintenance cost (Rs. in Lacs/yr)			
1	Rain water harvesting (RWH)	--	4.00	1.00			
2	Sewage Treatment Plant (STP)	--	10.00	4.00			
3	Solid waste Management	--	7.50	3.50			
4	Landscaping	--	12.00	1.00			
5	Solar lighting	--	25.00	1.00			
6	DMP	--	315.71	27.78			
52. Storage of chemicals (inflammable/explosive/hazardous/toxic substances)							
Description	Status	Location	Storage Capacity in MT	Maximum Quantity of Storage at any point of time in MT	Consumption / Month in MT	Source of Supply	Means of transportation
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
53. Any Other Information							
No Information Available							
54. Traffic Management							
		Nos. of the junction to the main road & design of confluence:	2				

Parking details:	Number and area of basement:	NA
	Number and area of podia:	6 Podiums: 1st Floor Podium: 1923.496 Sq. Mt., 2nd Floor Podium: 2612.885 Sq. Mt., 3rd Floor Podium: 2612.885 Sq. Mt., 4th Floor Podium: 2612.885 Sq. Mt., 5th Floor Podium: 2612.885 Sq. Mt. and 6th Floor Podium: 2361.05 Sq. Mt.
	Total Parking area:	Total Parking Area- 10271.237 Sq. Mt. (Parking area on Ground: 750.00 Sq. Mt., 1st Floor Podium: 1435.197 Sq. Mt., 2nd Floor Podium: 2021.51 Sq. Mt., 3rd Floor Podium: 2021.51 Sq. Mt., 4th Floor Podium: 2021.51 Sq. Mt. and 5th Floor Podium: 2021.51 Sq. Mt.)
	Area per car:	28.53 Sq. Mt.
	Area per car:	28.53 Sq. Mt.
	Number of 2-Wheelers as approved by competent authority:	Required: 36 Nos. and Provided: 37 Nos.
	Number of 4-Wheelers as approved by competent authority:	Required: 357 Nos. and Proposed: 360 Nos.
	Public Transport:	Nerul Railway Station
	Width of all Internal roads (m):	9 Meters

	CRZ/ RRZ clearance obtain, if any:	NA
	Distance from Protected Areas / Critically Polluted areas / Eco-sensitive areas/ inter-State boundaries	NA
	Category as per schedule of EIA Notification sheet	8 (a) B2
	Court cases pending if any	NA
	Other Relevant Informations	NA
	Have you previously submitted Application online on MOEF Website	No
	Date of online submission	-

Enclosure No. 02: Utilities Plan



Enclosure No. 03: Undertaking for E-Waste Management



To,

Date: 19.09.2019

The Member Secretary
State Level Expert Appraisal Committee,
15th Floor, New Administrative Block,
Department of Environment, Mantralaya,
Mumbai, Maharashtra.

Reference: 1. Proposed IT project "Greenscape Realty- Cybercode" at Plot no D-107, TTC
Industrial Area, MIDC, Nerul, Navi Mumbai.

2. MoEF application vide no. SEIAA- Statement 0000003195 dated 22.03.2019

Subject : Disposal of E-Waste

Respected Sir,

We hereby confirm that the e-waste which will be generated in our proposed IT Building at Plot no D-107, TTC Industrial Area, MIDC Nerul will be collected within the site and shall be sent to MPCB approved Authorized E-waste recyclers for their disposal. Please find enclosed the list of Authorized E-waste recyclers for your kind perusal.

Thanking you.

Yours Truly,

M/s. Greenscape Realty



PARTNER

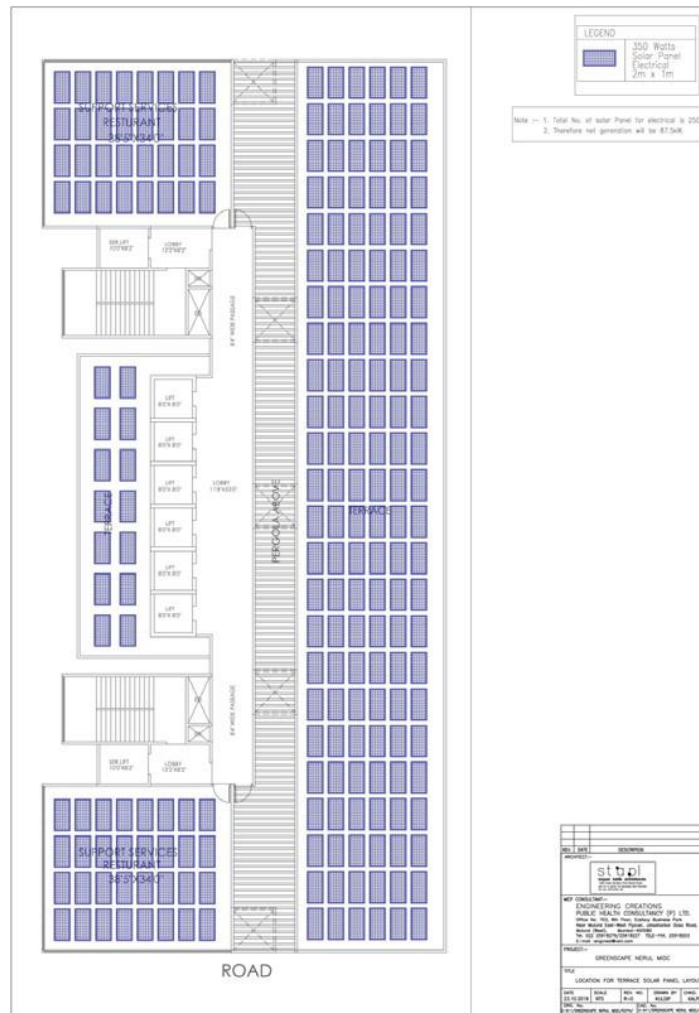
Encl: as above



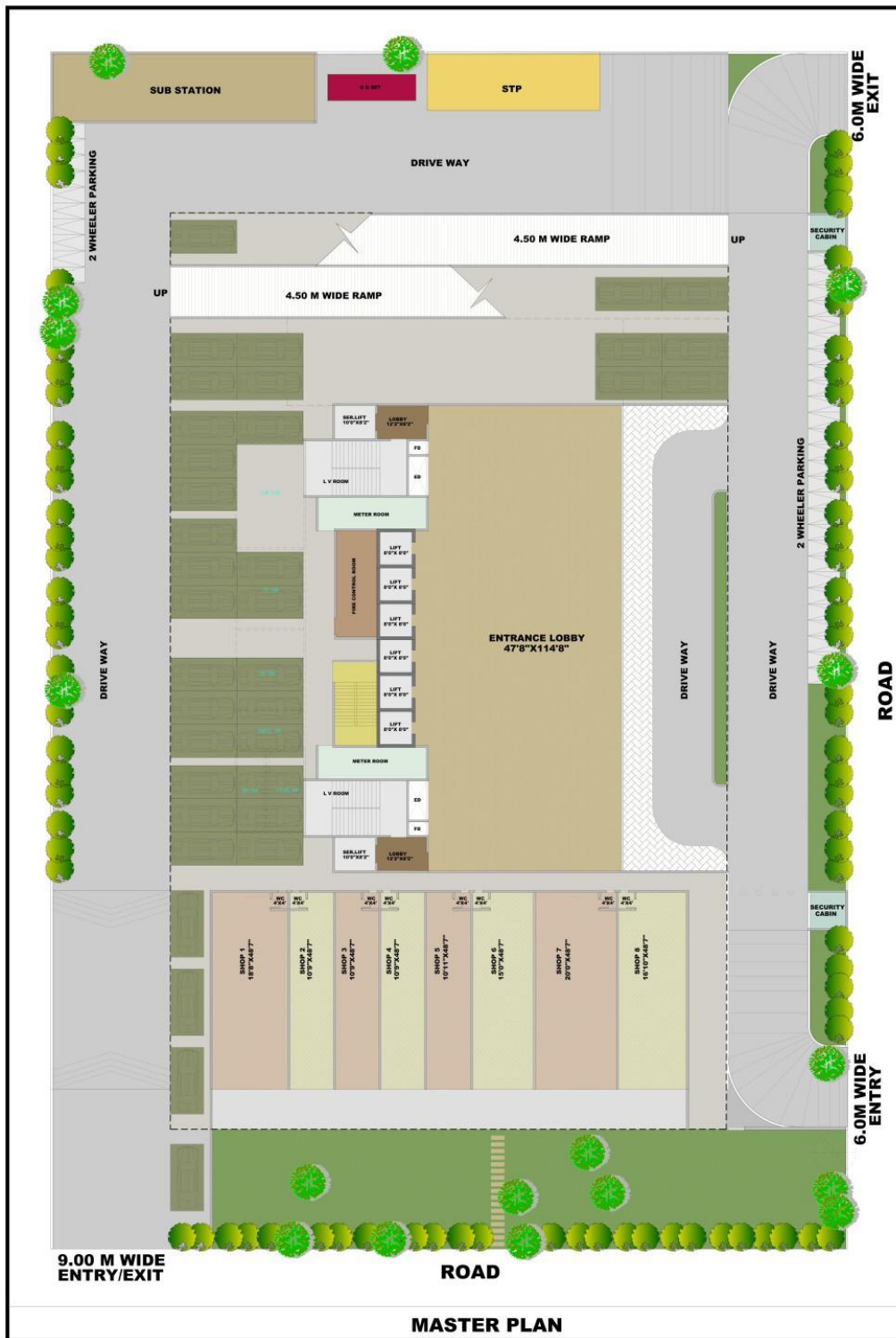
Greenscape Realty
1908, Cyber One, Plot No. 4 & 6, Sector 30A,

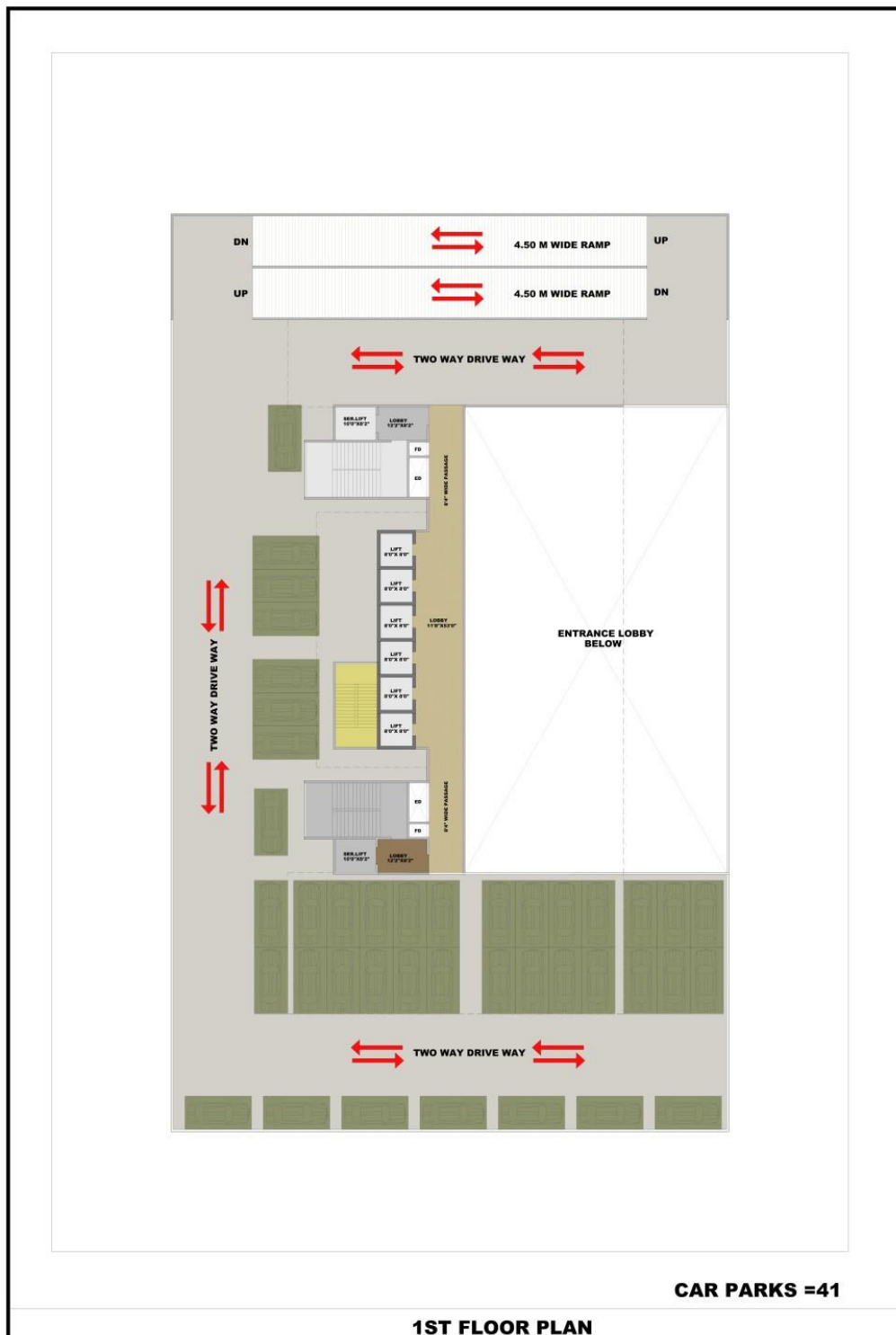
Enclosure No. 04- Solar Energy Calculation and Solar Panel Location Plan

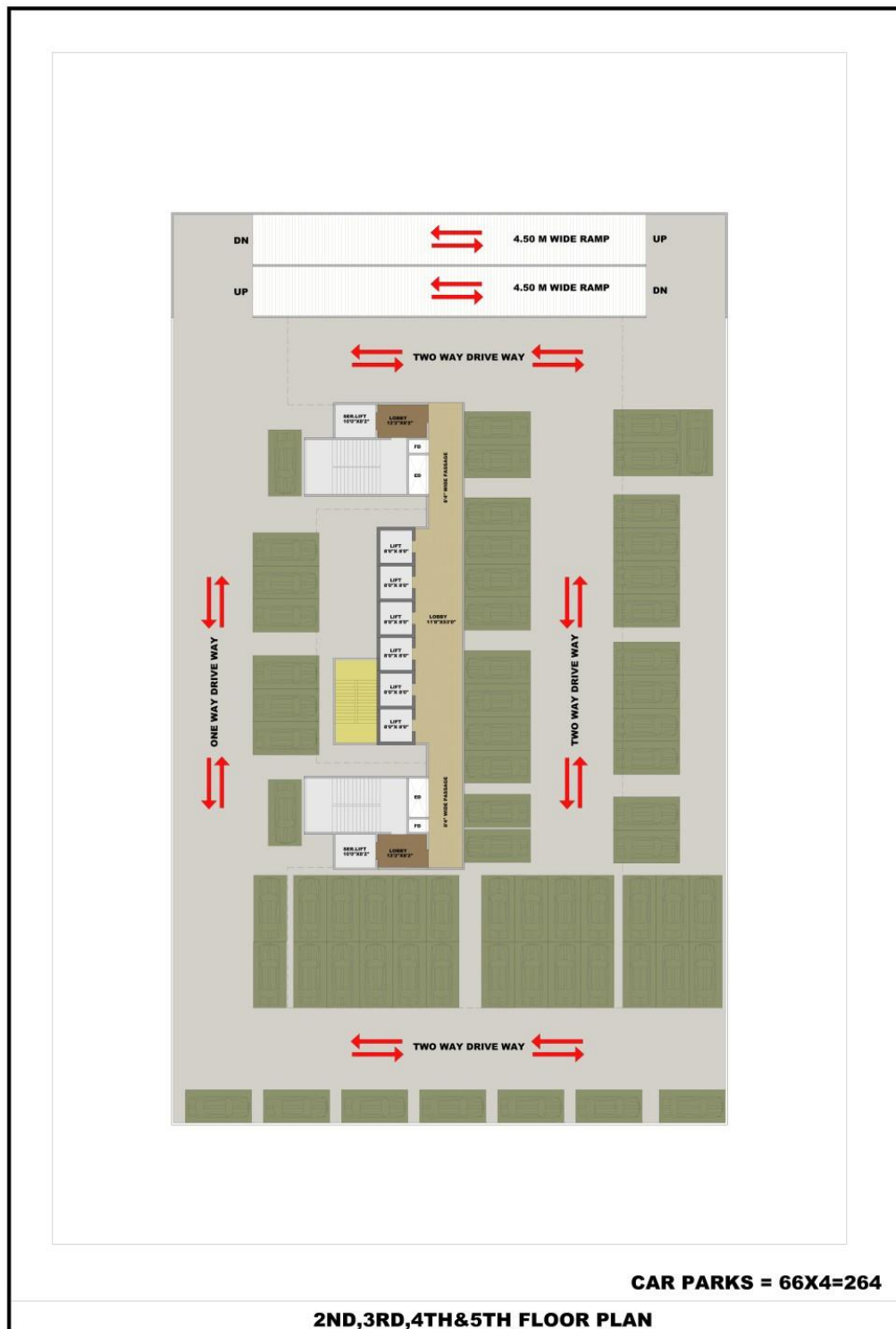
Parameter	ECBC Prescriptive Compliance	Proposed Case
Renewable Energy Systems	A dedicated Renewable Energy Generating Zone equivalent to at least 25 % of roof area or area required for generation of energy equivalent to 1% of total peak demand or connected load of the building, whichever is less, shall be provided in all buildings.	Max. Demand Load: 2173.81 KW 1 % of the Total peak demand or connected load of the building = 21.74KW Generation of electricity from 1 panel =350 W or 0.350 kW 88 kW load is connected in the project. i.e. 4.02% of the total load. Total panels required = 250 nos.

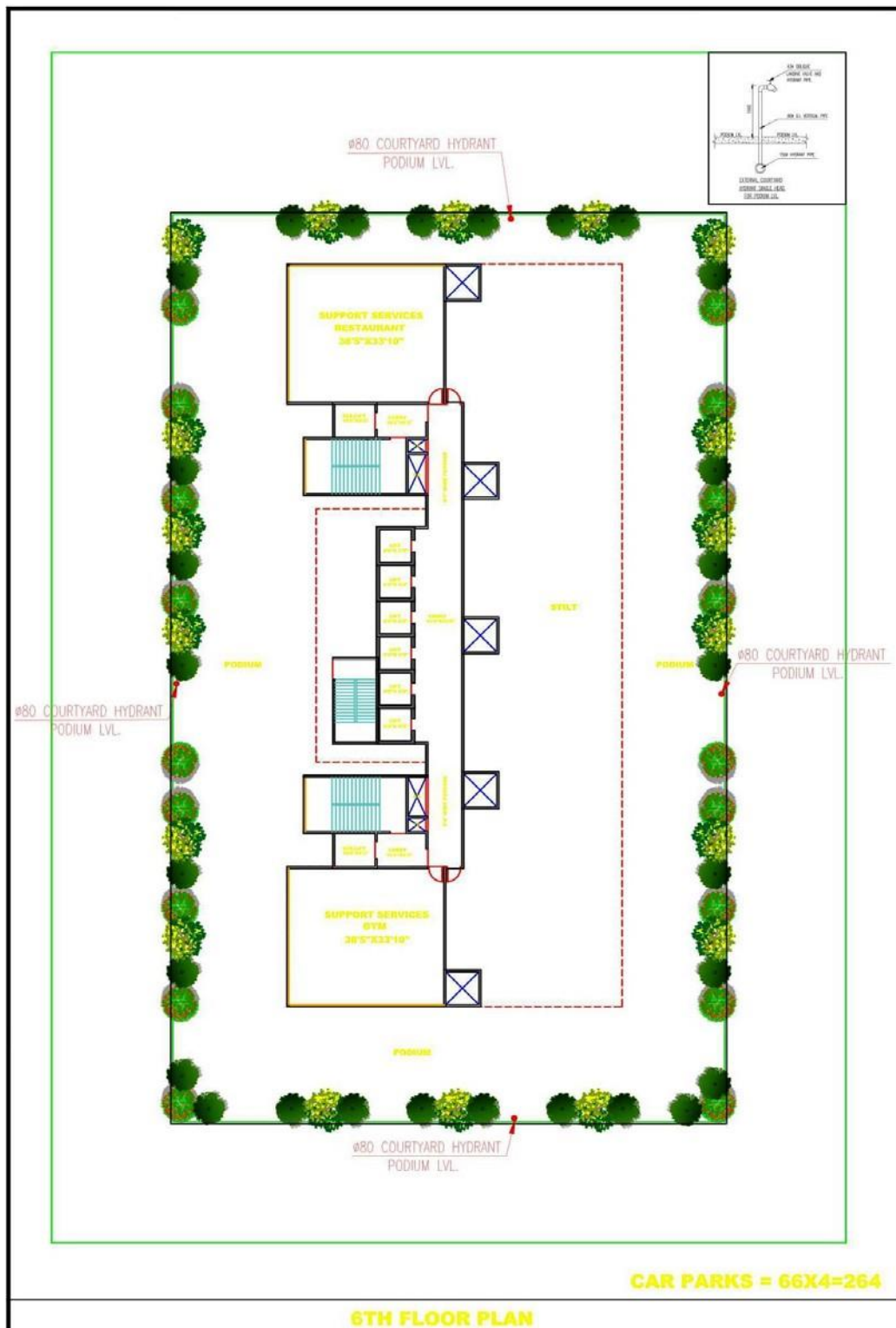


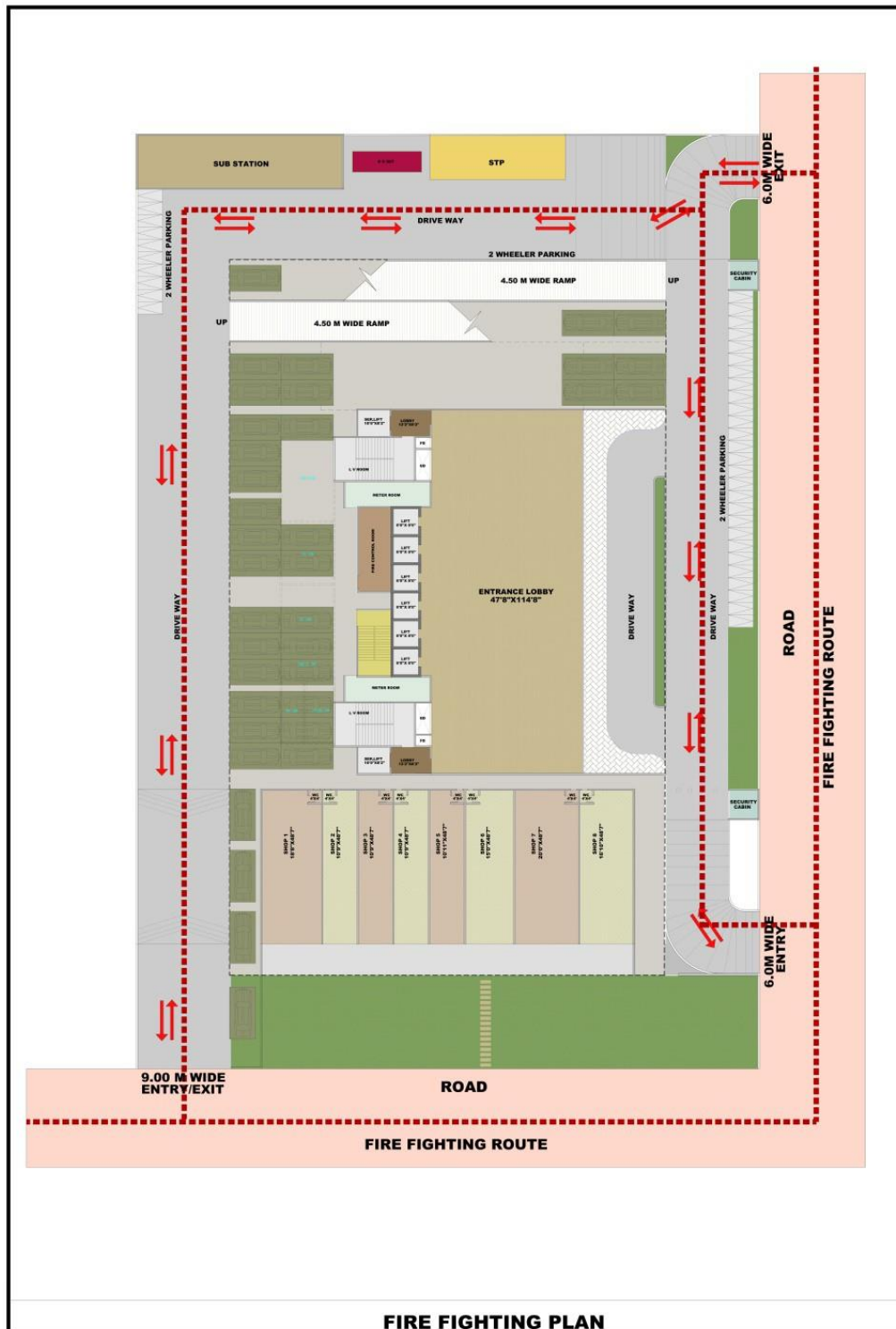
Enclosure No. 05: Master, Podium and Fire Fighting Plans











Enclosure No. 06: Provisional CFO NoC

MAHARASHTRA INDUSTRIAL DEVELOPMENT CORPORATION
(A Government of Maharashtra Undertaking)
HEAD OFFICE : "Udyog Sarthi", Mahakali Caves Road,
Andheri (E), Mumbai – 400 093.
Tele: (022) 26870052/54/27/73 Fax: (022) 26871587
PRINCIPAL OFFICE : 4.4 (A), 12th Floor, World Trade Centre, Complex-1,
Cuffe Parade, Mumbai – 400 005
Tele : (022) 22151451/52/53 Fax : (022) 22188203



No, MIDC/Fire/B-32610
Date: 12/04/2019

M/s, Greenscape Reality,
Plot No: D-107 MIDC
MIDC TTC Indl. Area.

Sub: Grant of "Provisional No-Objection Certificate" to your proposed
construction of I.T. Building on Plot No: D-107 at MIDC, TTC Indl.
Area.

Ref: Your application vide no; SWC/14/521/20181206/592769.

Dear Sir,

This has reference to the above this office has "**No Objection (Provisional)**" for
your proposed construction on Plot No: D-107 at MIDC, TTC Indl. Area. The details of
the constructions as per the drawing submitted by you are as mapped under your
BPAMS application. The plot area of the co. is **5400.00 Sq mtr.** The proposed built up
area is **16038.99 Sq. Mtr.** The height of the proposed structure is **98.35 mtr.** The area
wise details of each floor are as under:-

Floor Name	Proposed FSI Area Ind.	Bal Ind	Terrace	Stair	Lift	Pass	Lift Lobby
Twenty-fifth Floor (IT Support Services Restaurant & Gym)	274.52	10.45	782.09	62.32	50.53	47.94	75.83
Twenty-fourth Floor (Office)	870.05	87.00	0.00	62.32	50.53	47.94	75.83
Twenty-third Floor (Office)	758.17	76.55	0.00	62.32	50.53	47.94	75.83
Twenty-second Floor (Office)	870.05	87.00	0.00	62.32	50.53	47.94	75.83
Twenty-first Floor (Office)	870.05	87.00	0.00	62.32	50.53	47.94	75.83
Twentieth Floor (Office)	870.05	87.00	0.00	62.32	50.53	47.94	75.83
Nineteenth Floor (Office)	758.17	76.70	0.00	62.32	50.53	47.94	75.83
Eighteenth Floor (Office)	870.05	87.00	0.00	62.32	50.53	47.94	75.83
Seventeenth Floor (Office)	870.05	87.00	0.00	62.32	50.53	47.94	75.83
Sixteenth Floor (Office)	870.05	87.00	0.00	62.32	50.53	47.94	75.83
Fifteenth Floor (Office)	758.17	76.70	0.00	62.32	50.53	47.94	75.83
Fourteenth Floor (Office)	870.05	87.00	0.00	62.32	50.53	47.94	75.83
Thirteenth Floor (Office)	870.05	87.00	0.00	62.32	50.53	47.94	75.83
Twelfth Floor (Office)	870.05	87.00	0.00	62.32	50.53	47.94	75.83
Eleventh Floor (Office)	758.17	76.70	0.00	62.32	50.53	47.94	75.83
Tenth Floor (Office)	870.05	87.00	0.00	62.32	50.53	47.94	75.83
Ninth Floor (Office)	870.05	87.00	0.00	62.32	50.53	47.94	75.83
Eighth Floor (Office)	870.05	87.00	0.00	62.32	50.53	47.94	75.83
Seventh Floor (Office)	758.17	76.70	0.00	62.32	50.53	47.94	75.83
Sixth Floor (Podium Parking Floor & Support Services Restaurant)	2893.80	0.00	0.00	0.00	50.53	0.00	0.00
Fifth Floor (Podium Parking Floor)	2893.80	0.00	0.00	0.00	50.53	0.00	0.00
Fourth Floor (Podium Parking Floor)	2893.80	0.00	0.00	0.00	50.53	0.00	0.00
Third Floor (Podium)	2893.80	0.00	0.00	0.00	50.53	0.00	0.00

Parking Floor)							
Second Floor (Podium Parking Floor)	2893.80	0.00	0.00	0.00	50.53	0.00	0.00
First Floor (Podium Parking Floor)	2893.80	0.00	0.00	0.00	50.53	0.00	0.00
Ground Floor (IT Support Services- Parking Area)	5401.13	0.00	0.00	0.00	50.53	0.00	0.00
Total :	16034.72	1524.80	782.09	1184.08	1313.78	910.86	1440.83

- The occupant load should not exceed in any case as prescribed in Table – 3 of NBC 2016 part IV.

This N.O.C. is valid subject to fulfillment of the following conditions:

1. The plans of the proposed Construction of building adhering to the D.C. Rules of MIDC & National Building Code-2016 where necessary) should be approved by The Deputy Engineer, & PA-III, (SPA) MIDC, Division No-II Thane.
2. The drainage completion certificate & Occupation certificate should be obtained from The Deputy Engineer, & PA-III, (SPA) MIDC, Division No-II Thane. The B.C.C. & D.C.C. shall be issued subject to "Final NO-Objection Certificate" from fire department.
3. Under Section 3 of Maharashtra Fire Prevention and Life Safety Measures Act, 2006 (hereinafter referred to as "said Act") The applicant (developer, owner, occupier by whatever name called) shall comply with all the Fire and Life Safety measures adhering to National Building Code of India, 2016 and as amended from time to time failing which it shall be treated as a violation of the said Act.
4. As per the provision as under: - 10 of the said Act. No person other than the License Agency shall carry out the work of providing Fire Prevention and Life Safety Measures or performing. Such other related activities required to be carried out in any place or building or part thereof: A list of License Agency is available on Maharashtra Fire Services website www.mahafireservice.gov.in. No Licensed Agency or any other person claiming to be such Licensed Agency shall give a certificate under sub-section (3) of section 3 regarding the compliance of the fire prevention and life safety measures or maintenance thereof in good repair and efficient condition, without there being actual such compliance or maintenance.
5. Under Section 11 of the said Act, the fire service fees shall be assessed and the same shall be payable after serving the notice to that effect or prior to issue of the building completion certificate or occupancy certificate whichever is earlier.
6. Under Section 45 of the said Act, the owner/occupier or developer shall appoint Fire Officer/Officers and staff for taking adequate Fire and Life Safety Measures, qualifications and experience of such persons be got approved from the Chief Fire Officer & Fire Advisor, MIDC Fire Services.
7. Though certain conditions are stipulated from the said Act and the National Building Code of India, it is obligatory on part of the applicant that is developer, builder, occupier, owner, tenant, by what so ever named called to abide with the provisions of the said Act failing which it shall be actionable under the provisions of said act.
8. Proper roads in the premises should be provided for easy mobility of the Fire Brigade Appliance & Marginal spaces around the building should be kept free from obstructions & open to sky at all the time. Minimum marginal spaces should be confirming with Table No.10 of D.C. Rules of MIDC, 2009. The load bearing capacity of internal roads shall not be less than 45 Tons.
9. All portable firefighting equipment's installed at various locations as per local hazard such as Co2-DCP, Foam as per IS: 15683, & it must be strictly confirming to relevant IS specification. It is recommended for every 100 Sq. Meter one fire extinguisher should be provided for electrical installation Co2 extinguisher of 4.5 Kg should be provided.
10. All the firefighting equipment shall be well maintained and should be easily accessible in case of emergency.
11. Emergency Telephone numbers like "Police", "Fire Brigade", "Hospital", "Doctors", and "Responsible persons of the office" should be displayed in Fire Control Room, Security Office and in Reception area.

12. It shall be ensured that security staff & every employee of the office, security are trained in handling **firefighting equipment & in fire fighting**.
13. The Fire Exit Drill or Evacuation Drill should be plan and instruction should be given to the staff minimum **four times in a year** and drill should be carried out **twice in a year**.
14. Cautionary boards such as **"DANGER", "NO SMOKING", "EXIT", "FIRE ESCAPE", "EXTINGUISHER", "FIRE HYDRANT"** etc. should be displayed on the strategic location to guide the occupants in case of emergency. The signs should be of florescent type and should glow in dark.
15. **"On-Site" & "Off-Site"** emergency plan shall be prepared & mock drills shall be conducted twice a year & instructions to every employee shall be given once in three months.
16. The use of combustible surface finishes on walls (including facade of the building) and ceiling affects the safety of the occupants of the building. Such finishes tend to spread the fire and even though the structural elements may be adequately fire resistant, serious danger to life may result. It is therefore, essential to have adequate precautions to minimize spread of flame on wall, façade of building and ceiling surfaces.
17. The finishing materials used for various purposes and décor shall be such that it shall not generate toxic fumes / smoke.
18. Automatic smoke venting facilities shall be provided for safe use of exits in windowless buildings.
19. Natural draft smoke venting shall utilize roof vents in walls at or near the ceiling level, such vents shall be normally open, or, if closed, shall be designed for automatic opening in case of fire, by release of smoke sensitive devices.
20. Where smoke venting facilities are installed for purposes of exit safety, these shall be adequate to prevent dangerous accumulation of smoke during the period of time necessary to evacuate the area served, using available exit facilities with a margin of safety to allow for unforeseen contingencies.
21. The fluorescent glow signs like **"Staircase", "Extinguisher", "Fire Escape" "Hydrant Point", "Manual Call Point" "Exit", "Lift"** shall be installed on strategic locations in all common areas of the building like passages, Corridors etc.
22. Fire evacuation orders & exit map shall be provided in every floor & in lobbies of the buildings.
23. LPG banks should not be stored on upper floor for cooking etc. The kitchen for commercial purpose on uppers floors is not permitted.
24. The Glassing and facade other Glasses should have at least one hour fire resistance and should be UL approved and in accordance with NFPA requirements.
25. The glass faced should be protected with coating film so that in case of breaking of glass the glass can remain in it's place for some hours before replacement. This will reduce the risk of injuries to occupants and fire & rescue personal. In the event of blast the shock wave created which creates the damage to glass faced the use of film will help to reduce the damages due to glass breaking.
26. This being a very special type of building if any additional recommendations to be added or deleted depending upon the need of the fire safety requirement of buildings.
27. The Chief Fire Officer & Fire Advisor, M.I.D.C. reserves all right to modify the fire safety recommendations and it shall be responsibility of company authorities to maintained close liaison with fire department.
28. **A high rise building during construction shall be provided with the following fire protection measures, which shall be maintained in good working condition at all times:**
29. **Dry riser of minimum 100 m.m. dia. Pipe with hydrant outlets on the floors constructed with a fire service inlet.**
30. **The use of combustible surface finishes on walls (including facade of the building) and ceiling affects the safety of the occupants of the building. Such finishes tend to spread the fire and even though the structural elements may be adequately fire resistant, serious danger to life may result. It is therefore, essential to have adequate precautions to minimize spread of flame on wall, façade of building and ceiling surfaces.**

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34. Where smoke venting facilities are installed for purposes of exit safety, these shall be adequate to prevent dangerous accumulation of smoke during the period of time necessary to evacuate the area served, using available exit facilities with a margin of safety to allow for unforeseen contingencies.
35. If the building or part of building is Sub-leased, sold to some other company then the prospective buyer / sub-leased must obtain "No – Objection Certificate" form this office before occupying the building / floors. You are hereby informed to incorporate suitable clause to that effect in sub-leases agreement or agreement for sale.
36. Pressurization should be provided to the all the staircases and Lift Shaft's & Lift lobbies of the building. The mechanism for the pressurization shall act automatically with the fire alarm/ sprinkler system and it shall be possible to operate this mechanically also.
37. The Final NOC for the above building will be issued after satisfactory installation of Fire Prevention & Fire Protection arrangement. This building should not be occupied without obtaining Final NOC from this Dept. & OC from the SPA, MIDC, failing which you will be solely responsible for the consequences, if any.

Standard Specifications and Regulations to be followed: -

- a. D.C. Rules of MIDC & Part-3 & 4 National Building Code: 2016,
- b. **IS: 3844** – for installation and maintenance of internal fire hydrants and hose reels on premises.
- c. **IS: 2189** – for selection, installation and maintenance of automatic fire detection and alarm system.
- d. **IS: 15683** – for selection, installation and maintenance of portable first aid fire extinguishers.
- e. **IS : 9583 : 1981** Emergency lighting units.
- f. **IS 12456 : 1988** Code of practice for fire protection of electronic data processing installation.
- g. **IS 4963 : 1987** Recommendations for buildings and facilities for physically handicapped.
- h. **IS 3614 (Part I) :1966** Specification for fire check doors.

Other Important Codes & Standards:-

1. Code of practice for Fire Safety Buildings IS-1642 – for Details of Construction.
2. Code of Practice of Fire Safety of Buildings IS-1643– Exposure Hazard.
3. Code of Practice of Fire Safety of Buildings IS-1644 – Exit requirement and Personal Hazard.
4. IS : 15105 – Design and installation of fixed automatic sprinkler fire extinguishing system.
5. IS 9668 : 1990 Code of practice for provision and maintenance of water supplies and firefighting.
6. IS 2175 : 1988 Specification for heat sensitive fire detectors for use in automatic fire alarm system.
7. IS 11360 : 1985 Specification for smoke detectors for use in automatic electrical fire alarm system.
8. IS 9457 : 1980 Safety colours and safety signs.
9. IS 12349 : 1988 Fire protection – Safety sign
10. IS 12407 : Graphic symbols for fire protection plan.

FIRE PREVENTION
Passive Fire protection required.

Requirement and Provision: - The following passive fire protection systems will have to be followed and installed for the Life Safety of the building as per Part 3 & 4 of National Building Code 2005:-

Sr. No.	Clause Number	Description.
1.	Clause NO: 3.3.1 & 3.3.2	Fire Test General Requirement: Element / Component shall have the requisite fire resistance performance when tested in accordance with the accepted standards.
2.	Clause NO: C-9	Compartmentation: The building shall be suitably compartmentalized so that the fire & smoke remain confined to the area where the fire incident has occurred & does not spread to other part of the building.
3.	Clause NO: 4.10.5	Smoke Extraction System: The exhaust system may be continued, provided the construction of the ductwork & fans is such that it will not be rendered inoperable by hot gases & smoke & there is no danger of spread of smoke to other floors via the path of extraction system.
4.	Clause NO: 3.4.12.3	Smoke management: Where smoke venting facilities are installed for the purpose of exit safety these shall be adequate to prevent dangerous accumulation of smoke during the period of time necessary to evacuate the area served using available exit facilities, with margin of safety to allow for unforeseen contingencies.
5.	Clause NO: C-1.17	Fire rated ducts: Where the ducts passes through fire walls, the opening around the duct shall be sealed with fire resisting materials having the fire resistant rating of the compartment. Where the duct crosses the compartment which is fire rated for same fire rating. Depending on the services passing around the duct work, which may be affected in case of fire temperatures rising, the ducts shall be insulated
6.	Clause NO: C-1.12 a	Cable ducts: The electric distribution cables/wiring shall be laid in separate duct. The duct shall be sealed at every floor with non-combustible material having the same fire resistance as the fire rating of the duct.
7.	Clause NO: C-1.12 e	Fire rated ceilings: The exhaust system may be continued, provided the construction of the ductwork & fans is such that it will not be rendered inoperable by hot gases & smoke & there is no danger of spread of smoke to other floors via the path of extraction system.
8.	Clause NO: 3.3.3	Steel protection: Load bearing steel beams & columns of building having total covered area of 500Sq.Mtrs. and above shall be protected against failure collapse of structure in case of fire. This could be achieved by using appropriate methodology using suitable fire rated materials as per the accepted standards.
9.	Clause NO: 4.13	Fire escape enclosure: Fire towers shall be constructed of walls with a 2 hours fire rating without openings other than the exit doorway, with platforms, landings & balconies with the same fire rating of 2 Hours.
10.	Clause NO: C-1.4	Glazing: If glazing or glass bricks are used in a stair case shall have fire rating of minimum 2 hours.
11.	Clause NO: 3.4.19	Glazing: If glass is used as a façade for building it shall have minimum 1 hour fire rating.
12.	Clause NO: 3.4.8.3	Fire stopping: Every vertical opening between the floors of a building shall be suitably enclosed or protected as necessary to provide reasonable safety to the occupants while using the means of egress by preventing spread of fire, smoke or fumes through vertical openings from floor to floor, which will allow the occupants to complete their safe use of means of egress.

13.	Clause NO: 3.4.8.4	Fire Stopping: Openings in the walls or floors which are provided for the passage of all building services like cables, electrical wiring & telephone cables etc. Shall be protected by the enclosure in the form of Ducts/shafts with a fire resistance of not less than 2 Hours.
14.	Clause NO: C-1.9	Fire stopping service ducts & shafts: Service ducts & shafts shall be enclosed by walls of 2 hours & doors of 1 hour fire rating. All such ducts/shafts shall be properly sealed & fire stopped at all floors.
15.	Clause NO: C-1.12	Fire stopping cable ducts penetration: The electrical distribution cables/wiring shall be laid in separate duct. The duct shall be sealed at every floor with non-combustible materials having the same fire resistance as the fire rating of the cable duct.

Active Fire protection required for I.T. Building
As per Table 7 of Part IV NBC 2016.

Sr. No.	FIRE FIGHTING INSTALLATION	Requirements	Provision	Remarks
1.	Portable Fire Extinguishers	Required in all buildings on each floor.	IS: 15683 & 2190.	Portable Fire Extinguisher should be installed confirming to IS 15683 & other I.S. codes
2.	Hose Reel	Required at prominent places.	At Various strategic Locations.	On each floor in the Staircase landing for Fire Fighting. The first aid hose reel shall be connected directly to riser/down comer main and diameter of the hose reel shall not be less than 19mm confirming to IS 884:1985
3.	Wet Risers & Down Comers	Required in entire Bldg.	In all staircases & fire escape staircases	Required to provide in the Staircase and Fire Escape Staircase. Landing of Valve should be installed confirming to IS:5290.
4.	Court Yard Hydrant or Ring hydrant system around the building.	Required around the proposed building.	Fire Brigade Inlet connection should be provided. Hydrant points should be provided with 2 Nos. of Delivery Hose confirming to IS-636 along with Standard Branch (Universal) confirming to IS-2871. The distance between 2 Hydrants should not be more than 30 Mtrs. The guidelines should be followed as per IS 3844:1989 & IS 13039:2012.	
5.	Manually Operated Fire Alarm System	Required in entire building	At every floor on strategic location	Manually Operated Fire Alarm should be provided; it should be connected to alternate power supply.
6.	Underground Static Storage Tank	Required 2,00,000 liters		This water storage should be exclusively for Fire Fighting.
7.	Terrace Level Tank	Required 20,000 Ltrs.		For wet riser cum down comer. On each terrace of building
8.	Fire Pump	2 No. 4500 lpm electrical driven main pumps 1 No. 4500 lpm Diesel driven stand by pump 2 No. 180 lpm electric driven jockey pump 900 lpm electric driven Booster Pump on every terrace tank.		Fire Fighting pumps shall be well maintained. A separate arrangement of pumping should be done for sprinkler system. All the fire pumps must be centrifugal pumps only

Sr. No.	FIRE FIGHTING INSTALLATION	Requirements	Provision	Remarks
9.	Automatic smoke Detection System & Fire alarm system.	Required in entire building at all floors (If false ceiling voids exceeding 800mm of height above false Detection System should be provided)		Standards and guidelines given in IS-11360-1985 specification for Smoke Detectors for use in Automatic Electrical Fire Alarm system & IS 2189:2008 Selection, Installation and Maintenance of Automatic Fire-Detection and Alarm System should be followed.
10.	Automatic Sprinkler system.	Required in entire building at all floors and Fire Pump Room (If false ceiling voids exceeding 800mm of height above false ceiling sprinkler should be provided)		Separate Pumping arrangement should be provided for the Sprinkler system. Guidelines are given in IS 15105 Design and installation of Fixed Automatic sprinkler fire Extinguishing system
11.	Fire Doors	Required for all staircases. it should be self-closing type.	Fire Doors of 2 hrs. Fire Resistance Rating should be provided in all buildings at the entrance of all the staircases on all floors. Certification from the Competent Authority shall be obtained & submitted to this office for record.	
12.	Manual Call Point	Required in all building.	Manual Call Point should be provided at prominent places in all buildings	
13.	Emergency Lights	Required in escape routes.	For speedy evacuation in case of emergency. With alternate power backup.	
14.	PA System with Talk Back Facility	Required	To guide the occupants in case of emergency.	
15.	Auto D.G. Backup	Required	Required for all fire safety systems.	
16.	Pressurization	Required	In all staircase, Lobbies & Lift shaft in entire Bldg.	
17.	Sign Indicators for all fire safety, safe evacuation of occupants in case of emergency signs	Required at Prominent Places.	Sign indicators should be provided at prominent places as per the guidelines given in IS:9457 for Safety colour and Safety IS:12349 for Fire Protection Safety Signs IS: 12407 for Graphics symbols for Fire Protection Plan.	
18.	Fire Brigade Connection- For Static Water Tank and For Hydrant System		Required at the Main Gate and on fire water tank	

*****Guidelines for Refuge Area:-**

Refuge Area: Horizontal Exits/Refuge Area :-

A horizontal exit shall be through a fire door of 120 min rating in a fire resistance wall. Horizontal exit require separation with the refuge area or adjoining compartment through 120 min fire barrier. The adjoining compartment of the horizontal exit should allow unlocked and ease of egress and exits for the occupants using defend in place strategy.

- Requirements of horizontal exits are as under:
 - a) Width of horizontal exit doorway shall be suitable to meet the occupant load factor for egress.
 - b) Doors in horizontal exits shall be openable at all times from both sides.
 - c) All doors shall swing in the direction of exit travel. For horizontal exits, if a double leaf door is used, the right hand door leaf shall swing in the direction of exit travel.
 - d) Refuge area shall be provided in buildings of height more than 24 m. Refuge area provided shall be planned to accommodate the occupants of two consecutive floors (this shall consider occupants of the floor where refuge is provided and occupants of floor above) by considering area of 0.3 m² per person

for the calculated number of occupants and shall include additionally to accommodate one wheelchair space of an area of 0.9m² for every 200 occupants, portion thereof, based on the occupant load served by the area of refuge or a minimum of 15 m², whichever is higher, shall be provided as under:

- 1) The refuge area shall be provided on the periphery of the floor and open to air at least on one side protected with suitable railings.
- 2) Refuge area(s) shall be provided at/or immediately above 24 m and thereafter at every 15 m or so.
The above refuge area requirement for D-6 occupancy requirement shall however be in accordance with 6.4.2.2.
- e) A prominent sign bearing the words 'REFUGE AREA' shall be installed at entry of the refuge area, having height of letters of minimum 75 mm and also containing information about the location of refuge areas on the floors above and below this floor. The same signage shall also be conspicuously located within the refuge area.
- f) Each refuge area shall be ventilated and provided with first aid box, fire extinguishers, public address speaker, fire man talk back, and adequate emergency lighting as well as drinking water facility.
- g) Refuge areas shall be approachable from the space they serve by an accessible means of egress.
- h) Refuge areas shall connect to firefighting shaft (comprising fireman's lift, lobby and staircase) without having the occupants requiring to return to the building spaces through which travel to the area of refuge occurred.
- i) The refuge area shall always be kept clear. No storage of combustible products and materials, electrical and mechanical equipment, etc. shall be allowed in such areas.
- j) Refuge area shall be provided with adequate drainage facility to maintain efficient storm water disposal.
- k) Entire refuge area shall be provided with sprinklers.
- l) Where there is difference in level between connected areas for horizontal exits, ramps of slope not steeper than 1 in 12 shall be provided (and steps should be avoided).

NOTE – Refuge area provided in excess of the requirements shall be counted towards FAR.

High rise apartment buildings with apartments having balcony, need not be provided with refuge area; however apartment buildings without balcony shall provide refuge area as given above. Refuge area for apartment buildings of height above 60 m while having balconies shall be provided at 60 m and thereafter at every 30 m. The refuge area shall be an area equivalent to 0.3 m² per person for accommodating occupants of two consecutive floors, where occupant load shall be derived on basis of 12.5 m² of gross floor area and additionally 0.9 m² for accommodating wheel chair requirement or shall be 15 m², whichever is higher.

ATRIUM REQUIREMENTS :-

- a) In order for an atrium to be permitted in buildings, the following shall be complied:
 - 1) Atrium shall be permitted in buildings of Type 1 and Type 2 construction only.
 - 2) The use of combustible furnishing and decorations on the floor of the atrium shall be limited and sparsely distributed.
- b) Smoke detectors shall be provided on the underside of each floor protruding into the atrium, at the atrium roof and adjacent to each return air intake from the atrium. Within atrium space, beam type or aspirating type smoke detectors shall be used to ensure detection of smoke, considering factors such as stratification of smoke.
- c) Where the ceiling of the atrium is more than 17 m above the floor, water based protection (automatic sprinklers) at the ceiling of atrium is not required.
- d) Hydrants shall be available at the floor of the atrium and also at the adjoining upper spaces/floors of the atrium. Sprinklers are required to be installed for coverage of glass areas of retail, tenant and other areas adjoining the exit access corridor and atrium. Sprinklers shall be at a distance of 450 mm to 600 mm enabling cooling of such glass and limiting the extent of fire and smoke to the atrium (see Fig.16). This provision does not allow similar sprinkler

- installation arrangement to offset fire compartmentation requirements, in which case fire barrier is required as per relevant provisions of this Part.
- e) Atrium in business occupancy shall be planned with 6 air changes per hour (ACPH) while atrium in hotels and assembly occupancy shall be planned with 8 ACPH smoke extraction system. Such air changes shall be planned in atrium for a height of 15 m from the top.
 - f) Smoke exhaust fans shall be capable of operating effectively at 250°C to 120 min.
 - g) Makeup air supply points shall be located beneath the smoke layer and on the lower levels connected by the atrium.
 - h) Makeup air shall be provided by fans, opening to outside to allow infiltration, or the combination thereof.
 - i) It is recommended that makeup air be designed at 85 percent to 95 percent of the exhaust flow rate, not including the leakage through these small paths.
 - j) The makeup air shall not cause door-opening force to exceed allowable limits.
 - k) The makeup air velocity shall not exceed 1.02 m/s where the makeup air could come into contact with the plume unless a higher makeup air velocity is supported by engineering analysis.
 - n) Atrium smoke management system fans shall be provided with emergency.
 - o) If so required by the Authority, an engineering analysis should be performed which demonstrated that the smoke system for the atrium is designed to keep the smoke layer interface 1800 mm above the highest occupied floor level of exit access, open to the atrium, for a period equal to 1.5 times the calculated egress time or 20 min, whichever is greater.

GUIDELINES FOR INTERNAL STAIRWAYS as per NBC 2016:

- a) Stairways shall be constructed of non-combustible materials throughout. Hollow combustible construction shall not be permitted. Width of Staircase should be **1.5 M.**
- b) **No Gas piping shall be laid down in the stairway.**
- c) Internal staircase shall be constructed as a self-contained unit with at least one side adjacent to an external walls and shall be completely enclosed.
- d) Internal staircase shall not be arranged around lift shaft unless the later is entirely enclosed by material of fire resistance rating as that for type of construction itself.
- e) The access to main staircase shall be gained through at least half-an-hour fire resisting automatic closing doors, placed in the enclosing walls of the staircase. They shall be swing type doors opening in the direction of the escape.
- f) No living space, store or other space, involving fire risk, shall open directly in to staircase.
- g) The external exit door of a staircase enclosure at ground level shall open directly to the open space or should be accessible without passing through any door other than a door provided to form a draught lobby.
- h) The exit signs with arrows indicating the escape routes shall be provided at a height of 1.5 m. from the floor level on the wall and shall painted with fluorescent paint. All exit signs should be flush with the wall and so designed that no mechanical damage to them can result from the removing furniture, material or any other equipment.
- i) **Exits shall be so located that it will not be necessary to travel more than 30 Mtrs. from any point to reach the nearest exit.**

Staircase Design requirement:

- 1. The minimum headroom in a passage under the landing of a staircase and under the staircases shall be **2.2 Mtrs.**
- 2. Access to main staircase shall be through a fire / smoke check door of a minimum 2 hours fire resistance rating.
- 3. No living space, store or other fire risk shall open directly in to the staircases. The main and external staircases shall be continuous from ground floor to the terrace level.
- 4. No electrical shafts, A/c ducts or gas pipe etc. shall pass through or open in the staircases. Lifts shall not open in staircases.
- 5. The width of the staircase shall not be less than **1.5 Mtrs.**
- 6. **All the staircases shall be provided with mechanical Pressurization devices, which will inject the air in to staircase, lobbies or corridors to raise**

their pressure slightly above the pressure in adjacent parts of the building so the entry of toxic gases or smoke in to the escape routes is prevented.

Staircase Enclosures:-

1. The external enclosing walls of the staircase shall be of the brick or the RCC construction having the fire resistance of not less than two hours. All enclosed staircases shall have access through self-closing door of one hour fire resistance. These shall be single swing doors opening in the direction of escape. The door shall be fitted with the check action door closers.
2. The staircase enclosures on the external wall of the building shall be ventilated to the atmosphere at each landing.
3. Permanent vent at the top equal to the 5% of the cross section area of the enclosure and openable sashes at each floor level with area equal to 1 to 15 % of the cross sectional area of the enclosure on external shall be provided. The roof of the shaft shall be at least 1 meter above the surrounding roof. There shall be no glazing or the glass bricks in any internal closing wall of staircase. If the staircase is in the core of the building and cannot be ventilated at each landing a positive pressure of 5 mm w.g. by an electrically operated blower/ blowers shall be maintained.
4. The mechanism for pressurizing the staircase shaft shall be so installed that the same shall operate automatically on fire alarm system/ sprinkler system and be provided with manual operation facilities.

FIRE ESCAPE: (ENCLOSED TYPE) SHALL COMPLY THE FOLLOWING: -

1. **Travel Distance should be maintained as per the guidelines given in D.C. Rules of MIDC. Exits and staircase guidelines should be followed as per MIDC's DC Rules and National Building Code-2016.**
2. **Fire escape constructed of M.S. angles, wood or glass is not permitted.**
3. **Opening of the Fire Escape Staircase should be from outside.**
4. Fire Escape staircase should be enclosed type. These should always be kept in sound operable condition .
5. Fire Escape Staircase shall be directly connected to the ground.
6. Entrance to the Fire Staircase shall be separate and remote from the internal staircase.
7. Care shall be taken to ensure that no wall opening or window opens on to or close to Fire Escape Stairs.
8. The route to the external staircase shall be free of obstructions at all times.
9. The Fire Escape stairs shall be constructed of non-combustible materials, and any doorway leading to it shall have the required fire resistance.
10. No Staircase, used as a fire escape, shall be inclined at an angle greater than 45° from the horizontal
11. **The width of the staircase should as given in DC Rules of MIDC. The other detailed provision for exits in accordance with National building code - 2016.**
12. Fire Staircase shall have straight flight not less than 150 c.m. wide with 20 c.m. treads and risers not more than 19 c.m. The number of risers shall be limited to 15 per flight.
13. Handrails shall be of a height not less than 100 c.m. and not exceeding 120 c.m.
14. **All the staircase doors on every floor shall be provided with two hours fire resistive doors having panic bars at both the sides.**

FIRE PROTECTION REQUIREMENTS FOR LIFTS:

(Fire Protection Requirements of Lifts in High Rise Buildings) For Building of Height 15 m and Above

Following requirements over and above those specified in 6 and 8 and in Part 4 'Fire and Life Safety' of the Code are applicable to all lifts provided in buildings having height more than 15 m:

- a) All materials of constructions in load bearing elements, stairways and corridors and facades shall be non-combustible.
- b) The interior finishing materials shall be of very low flame spread type.
- c) Walls of the lift shall have a fire rating of 120 min. The lift well shall have a vent at the top, of area not less than 0.2 m² per lift.

- d) Landing doors – Lift landing doors shall be imperforate. Collapsible doors shall not be permitted. Lift landing doors provided in the lift enclosure shall have a minimum fire resistance rating of 60 min.
 - e) Lift car door – Lift car doors shall be imperforate. Collapsible car doors shall not be permitted.
 - f) Telephone or other communication facilities shall be provided in the lift car and the lift main lobby. Communication system for lifts shall also be connected to the fire control room of the building if provided. For lifts for use by persons with disabilities, the facilities shall be provided in accordance with 13 of Part 3 'Development Control Rules and General Building Requirements' of the Code.
 - g) Photo luminescent safety signs shall be posted and maintained on every floor at or near the lift indicating that in case of fire, occupants shall use the stairs unless instructed otherwise. The sign shall have the plan of the respective floor showing location of the stairways. The plan shall also indicate the direction to and maintained on every floor of buildings open to and used by the public shall comply with the requirements of accessible signage given in 13 of Part 3 'Development Control Rules and General Building Requirements' of the Code.
 - h) All lifts (fireman's lifts/non fireman's lifts) shall be provided with Phase I operation and per 7.1.1(k)(x) (grounding operation).
 - j) The grounding operation may be initiated by individual switches for lifts or a common switch for a group of lifts or by a signal from fire alarm system of the building if available.
 - k) Fireman lift – The fireman's lift is provided in a building for the purpose of aiding firefighters in evacuating trapped persons in the building and to take a equipments for fighting fire to upper levels with minimum delay. Some lifts out of all the lifts shall be identified as fireman's lifts.
The number of required fireman's lifts and their locations in a building will vary depending on the size, design, complexity of the building. Some considerations are as follows:
 - 1) There shall be at least one fireman's lift per building.
 - 2) If there are multiple wings in the building, there shall be at least one fireman's lift per wing.
 - 3) If there are multiple banks of lifts in the building there shall be at least one fireman's lift per bank of lift.
 - 4) If the building height is up to 60 m and it is zoned height-wise and it does not have single fireman's lift serving every floor of the building, then there shall be at least one fireman's lift per zone which shall serve the main level/fire access level and shall serve all the landings in the respective zone.
 - 5) If the building height is more than 60 m and it does not have any single fireman's lift serving all the floors, that is, it has all lifts serving only respective zones, the fireman's lift shall be provided in each zone separately, serving all landings in respective zone, with transfer landing transferring from one zone to another.
- Considering all the above, the fireman's lift(s) shall be identified on the building plan and duly displayed in Fire Command Centre.
- To be effective in firefighting operation, the fireman's lift shall have following requirements:
- i) The fireman's lift may be used by the occupants in normal times.
 - ii) The fireman's lift shall be provided with a fireman's switch. The switch shall be a two position (ON/OFF) switch fixed at the evacuation floor (normally main entrance floor) for enabling the lift to be put into fireman's mode. The switch shall be situated in a glass-fronted box with suitable label and fixed adjacent to the lift at the entrance level. When the switch is on, landing call-points shall become inoperative and the lift shall be on the car control only or on a priority control device. When the switch is off, the lift will return to normal working.
 - iii) The fireman's lift shall be provided with an audio and visual signal in the car.
 - iv) The fireman's lift shall have a floor area of minimum 1.43 m². It shall have loading capacity of not less than 544 kg (8 persons lift).

- v) The fireman's lift shall be provided with power operated (automatic) doors of minimum 0.8 m width.
- vi) The speed of the fireman's lift shall be 1.0 m/s or more such that it can reach the top floor from main floor/ firefighting access level within 1 min. In case the building is zoned, the fireman's lift shall operate from the lowest served landing to the topmost served landing in 1 min.
- vii) Reliable alternative source of power supply should be provided for all fireman lifts through a manually/automatically operated changeover switch. The route of wiring shall be safe from fire.
- viii) Suitable arrangements such as providing slope in the floor of lift lobby shall be made at all the landings to prevent water used during firefighting from entering the lift shafts.
- ix) The words 'Fireman Lift' shall be conspicuously displayed in fluorescent paint on the lift landing.
- x) Operational requirement of fireman's lift- The lift shall be provided with the following operational control, Phase I and Phase II.

Phase I – Return to evacuation floor –

- Shall start when the fireman's switch at the evacuation floor is turned to the 'ON' position or the signal from smoke detector (if provided by the Building Management System is on. All lifts controlled by this switch shall cancel all existing car calls and separate from landing calls and no landing or car calls shall be registered. The audio and visual signal shall be turned on. All heat and smoke sensitive door reopening devices shall be rendered inoperative.
- If the lift is travelling towards the evacuation floor, it shall continue driving to that floor.
- If the lift is travelling away from the evacuation floor, it shall reverse its direction at the nearest possible floor without opening its door and return non-stop to the evacuation floor.
- If the lift is standing at a floor other than the evacuation floor, it shall close the doors and start travelling non-stop to the evacuation floor.
- When at the evacuation floor, the lift shall park with doors open.
- The continuous audio signal is turned off after this return drive.

Note – If the building is designed for alternative evacuation floor, in case of fire at main floor the lifts shall park at the alternative evacuation floor with doors open.

Phase II – Operation of the lift shall be as defined below –

- The phase 2 is started after phase 1, if the fireman's switch is 'ON'.
- If the lifts are grounded by the smoke detector signal, for phase II to begin it shall be necessary to turn the fireman's switch 'ON'.
- The lift does not respond to landing call but registered car calls. All heat and smoke sensitive door reopening devices are rendering inoperative.
- When the car call button is pressed, the doors start closing. If the button is released before the doors are fully closed, they re-open. The car call is registered only when the doors are fully closed. After registering a car call the lift starts driving to the call. If more than one car call is registered, only the nearest call is answered and the remaining call will be cancelled at the fire stop.
- At the floor the doors are opened by pushing the door open button. If the button is released before the doors are fully open, they re-close.
- The lift returns to normal service when it stands at the evacuation floor with doors open and the switch is turned 'OFF' thereafter.
- The operation of fireman's lift shall be by means of a full set of push buttons in the car. Other operating systems shall be rendering inoperative.

Building of Height 60 m and above

The following requirements over and above those specified in guidelines mentioned in **Building of Height 15 m and above** are applicable to the lifts and lift enclosures provided in buildings having height more than 60 m.

- a) Fireman's lifts – Following additional requirements apply to all fireman's lifts in the building.
 - 1) The fireman's lift shall have loading capacity of not less than 1000 kg and floor area not less than 2.35 m².
 - 2) Electrical equipment within the fireman's lift well and on the car, located within 1.0 m of any wall containing a landing door, shall be protected from

- dripping and splashing water or provided with enclosures classified to at least IPX3 according to good practice [8-5A(9)].
- 3) The electrical switchgear placed less than 1 m above lift pit floor shall be protected to IP 67 as per to good practice [8-5A(9)]. The socket outlet and lowest lamp shall also be located at least 0.5 m above the highest permissible water level in the pit.
 - 4) Suitable means shall be provided in the lift pit to ensure that water will not rise above the level of the fully compressed car buffer.
 - 5) Means shall be provided to prevent the water level in the pit from reaching equipment which could create a malfunction of the fireman's lift.
 - 6) Alternative source of power supply shall be provided for all fireman's lifts through automatically operated changeover electric supply, it shall automatically trip over to alternative supply. The route of wiring shall be safe from fire.
- b) There shall be Fire Command Centre (FCC) and/or Building Management System (BMS) room in the building CCTV cameras shall be fixed in the lift lobbies and the display screen(s) shall be placed in the FCC or BMS room.

FIRE FIGHTING SHAFT (FIRE TOWER) :-

- An enclosed shaft having protected area of 120 min fire resistance rating comprising protected lobby, staircase and fireman's lift, connected directly to exit discharge or through exit passageway with 120 min fire resistance wall at the level of exit discharge to exit discharge.
- These shall also serve the purpose of exit requirement / strategy for the occupants.
- The respective floors shall be approachable from fire-fighting shaft enabling the fire fighters to access the floor and also enabling the fire fighters to assist in evacuation through fireman's lift.
- The firefighting shaft shall be equipped with 120 min fire doors.
- The firefighting shaft shall be equipped with firemen talk back, wet riser and landing valve in its lobby, to fight fire by fire fighters

Staircase and Corridor Lightings:

- a) 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. It should be of miniature circuit breaker type of switch so as to avoid replacement of fuse in case of crisis.
- b) Staircase and corridor lighting shall also be connected to alternate source of supply. The alternative source of supply may be provided by battery continuously trickle charged from the electric mains.
- c) Suitable arrangements shall be made by installing double throw switches to ensure that the lighting installed in the staircase and the corridor do not get connected to the sources of supply simultaneously. Double throw switch shall be installed in the service room for terminating the stand by supply.
- d) Emergency lights shall be provided in the staircase/corridor.
- e) All wires & other accessories used for emergency lights shall have fire retardant property.
- f) A stand-by electric generator shall be installed to supply power to staircase and corridor lighting circuits, fire lifts, the stand-by fire pump, pressurization fans & blowers, smoke extraction and damper system in case of failure of normal electric supply. The generator shall be capable of taking starting current of all the machines & circuits stated above simultaneously. If the stand-by pump is driven by diesel engine, the generator supply need not be connected to the stand-by pump or parallel HV/LV supply from a separate substation shall be provided with appropriate transformer for emergency. If this arrangement is provided then the arrangement of generator is not mandatory.

Emergency and Escape Lighting :-

1. Emergency lighting shall be powered from a source independent of that supplying the normal lighting.
2. Escape lighting shall be capable of

- A) Indicating clearly and unambiguously the escape routes.
 - B) Providing adequate illumination along such routes to allow safe movement of persons towards and through the exits.
 - C) Ensuring that fire alarm call points and firefighting equipment's provided along the escape routes can be readily located.
3. The horizontal luminance at floor level on the centerline of an escape route shall be not less than 10 lux. In addition, for escape routes up to 2 m wide, 50 percent of the route width shall be lit to a minimum of 5 lux.
 4. The emergency lighting shall be provided to be put on within 1 s of the failure of the normal lighting supply.
 5. Escape lighting luminaries should be sited to cover the following locations
 - a) Near each intersection of corridors
 - b) At each exit door
 - c) Near each change of direction in the escape route
 - d) Near each staircase so that each flight of staircase receives direct light.
 - e) Near any other change of floor level.
 - f) Outside each final exit and close to it
 - g) Near each fire alarm call point.
 - h) Near firefighting equipment, and
 - i) To illuminate exit and safety signs as required by the fire department.
 6. Emergency lighting systems shall be designed to ensure that a fault or failure in any one luminaire does not further reduce the effectiveness of the system.
 7. The luminaries shall be mounted as low as possible but at least 2 m above the floor level.
 8. Signs are required at all exits, emergency exits and escape routes, which should comply with the graphic requirements of the relevant Indian Standard.
 9. Emergency lighting luminaries and their fittings shall be of nonflammable type.
 10. It is essential that the wiring and installation of the emergency lighting system are of high quality so as to ensure their perfect serviceability at all times.
 11. The emergency lighting system shall be capable of continuous operation for a minimum duration of 1 hour and 30 minutes even for the smallest premises.
 12. The emergency lighting system shall be well maintained by periodical inspections and tests so as to ensure their perfect serviceability at all times.

Illumination of Means of Exit :-

Staircase and corridor lights shall conform to the following:-

- a) The staircase and corridor lighting shall be on separate circuit and shall be independently connected so that 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. It should be of miniature circuit breaker type of switch so as to avoid replacement of fuse in case of crises.
- b) Staircase and corridor lighting shall also be connected to alternative supply. The alternative source of supply may be provided by battery continuously trickle charged from the electric mains; and
- c) Suitable arrangements shall be made by installing double throw switches to ensure that the lighting installed in the staircase and the corridor does not get connected to two sources of supply simultaneously. Double throw switch shall be installed in the service room for terminating the supply.

Exit Requirement:

1. An exit may be doorway, corridor, Passageway(s) to an internal staircase, or external staircase, or to a verandah or terrace(s), which have access to the street, or to the roof of a building or a refuge area. An exit may also include a horizontal exit landing to an adjoining building at the same level.
2. Every exit, exit access or exit discharge shall be continuously maintained free of all obstructions or impediments to full use in the case of fire or other emergency.
3. Exits shall be clearly visible and the route to reach the exits shall be clearly marked and signs posted to guide the occupants of the floor concerned. Signs shall be illuminated and wired to an independent electric circuit on an alternative source of supply.

4. To prevent spread of fire and smoke, fire doors with 2 hours fire resistance shall be provided at appropriate places along the escape routes and particularly at the entrance to lift lobby and stair well where a 'funnel or flue effect' may be created inducing an upward spread of fire.
5. All exits shall provide continuous means of egress to the exterior of a building or to an exterior open spaces leading to the street.
6. Exits shall be so arranged that they may be reached without passing through another occupied unit.

Glass Facade

1. If the glass cladding is used / provided to the building the glass used for the cladding must be toughened glass.
2. The use of combustible surface finishes on walls (including facade of the building) and ceiling affects the safety of the occupants of the building. Such finishes tend to spread the fire and even though the structural elements may be adequately fire resistant, serious danger to life may result. It is therefore, essential to have adequate precautions to minimize spread of flame on wall, façade of building and ceiling surfaces.
3. The finishing materials used for various purposes and décor shall be such that it shall not generate toxic fumes / smoke.
4. Automatic smoke venting facilities shall be provided for safe use of exits in windowless buildings.
5. Natural draft smoke venting shall utilize roof vents in walls at or near the ceiling level, such vents shall be normally open, or, if closed, shall be designed for automatic opening in case of fire, by release of smoke sensitive devices.
6. **Where smoke venting facilities are installed for purposes of exit safety, these shall be adequate to prevent dangerous accumulation of smoke during the period of time necessary to evacuate the area served, using available exit facilities with a margin of safety to allow for unforeseen contingencies.**

GLAZING:-

The glazing shall be in accordance with Part 6 'Structural Design, Section 8 Glass and Glazing' of the Code. The entire glazing assembly shall be rated to that type of construction as given in Table 1. This shall be applicable along with other provisions of this Part related to respective uses as specified therein. The use of glass shall not be permitted for enclosures of exits and exit passageway.

Glass facade shall be in accordance with the following:

- a) For fully sprinklered building having fire separation of 9 m or more, tempered glass in a non-combustible assembly, with ability to hold the glass in place, shall be provided. It shall be ensured that sprinklers are located within 600 mm of the glass facade providing full coverage to the glass.
NOTE- In case of all other buildings, fire resistance rating of glass facade shall be in accordance with Table 1.
- b) All gaps between floor-slabs and facade assembly shall be sealed at all levels by approved fire resistance sealant material of equal rating as that of floor slab to prevent fire and smoke propagation from one floor to another.
- c) Openable panels shall be provided on each floor and shall be spaced not more than 10 m apart measured along the external wall from centre-to-centre of the access openings. Such openings shall be operable at a height between 1.2 m and 1.5 m from the floor, and shall be in the form of openable panels (fire access panels) of size not less than 1000 mm X 100 mm opening outwards. The wordings, '**FIRE OPENABLE PANEL OPEN IN CASE OF FIRE, DO NOT OBSTRUCT**' of at least 25 mm letter height shall be marked on the internal side. Such panel shall be suitably distributed on each floor based on occupant concentration. These shall not be limited to cubicle areas and shall be also located in common areas/corridors to facilitate access by the building occupants and fire personnel for smoke exhaust in times of distress.

Smoke Control of Exits :-

- a) In building design, compartmentation plays a vital part in limiting the spread of fire and smoke. The design should ensure avoidance of spread of smoke to adjacent spaces through the various leakage openings in the compartment

enclosure, such as cracks, openings around pipes ducts, airflow grills and doors. In the absence of proper sealing of all these openings, smoke and toxic gases will obstruct the free movement of occupants of the building through the exits. Pressurization of staircases is of great importance for the exclusion of smoke and toxic gases from the protected exit.

- b) Pressurization is a method adopted for protecting the exits from ingress of smoke, especially in high-rise buildings. In pressurization, air is injected into the staircases, lobbies, etc., as applicable, to raise their pressure slightly above the pressure in adjacent parts of the buildings. As a result, ingress of smoke or toxic gases into the exits will be prevented. The pressurization of staircases and lift lobbies shall be adopted as given in Table 6. The pressure difference for staircases shall be 50 Pa. Pressure difference for lobbies (or corridors) shall be between 25 Pa and 30 Pa. Further, the pressure differential for enclosed staircase adjacent to such lobby (or corridors) shall be 50 Pa. For enclosed staircases adjacent to non-pressurized lobby (or corridors), the pressure differential shall be 50 Pa.

Pressurization of Staircases and Lift Lobbies

(Clause 4.4.2.5 (b) and E-2)

Sr. No.	Component	Height of Building		
		Less than 15 m	15 m to 30 m	More than 30
(1)	(2)	(3)	(4)	(5)
i)	Internal staircases not with external wall	Pressurized except for residential buildings (A-2 and A-4)	Pressurized	Pressurized
ii)	Internal staircase with external wall	Pressurized except for residential buildings (A-2 and A-4) or Naturally ventilated	Naturally ventilated or Pressurized	Cross-ventilated or Pressurized
iii)	Lift lobby	Not required at ground and above. However lift lobby segregation and pressurization is required for lift commuting from ground to basement	Naturally ventilated or Pressurized ¹⁾	Cross-ventilated or Pressurized ¹⁾

NOTES :

- The natural ventilation requirement of the staircase shall be, achieved through opening at each landing, of an area 0.5 m² in the external wall. A cross ventilated staircase shall have 2 such openings in opposite/adjacent walls or the same shall be cross-ventilated through the corridor.
- Enclosed staircase leading to more than one basement shall be pressurized.

¹⁾ Lift lobby with fire doors (120 min) at all levels with pressurization of 25-30 PA is required. However, if lift lobby cannot be provided at any of the levels in air conditioned buildings or in internal spaces where funnel/flue effect may be created, lift hoistway shall be pressurized at 50 Pa. For building greater than 30 m, multiple point injection air inlets to maintain desired pressurization level shall be provided. If the lift lobby, lift and staircase are part of firefighting shaft, lift lobby necessary has to be pressurized in such case, unless naturally ventilated.

- c) Equipment and ductwork for staircase pressurization shall be in accordance with one of the following:

- Directly connected to the stairway by ductwork enclosed in non-combustible construction.
- If ducts used to pressurize the system are passed through shafts and grills are provided at each level, it shall be ensured that hot gases and smoke from the building cannot ingress into the staircases under any circumstances.

- d) The normal air conditioning system and the pressurization system shall be designed and interfaced to meet the requirements of emergency services. When the emergency pressurization is brought into action, the following changes in the normal air conditioning system shall be effected:
 - 1) Any re-circulation of air shall be stopped and all exhaust air vented to atmosphere.
 - 2) Any air supply to the spaces/areas other than exits shall be stopped.
 - 3) The exhaust system may be continued provided
 - i) The positions of the extraction grills permit a general air flow away from the means of egress;
 - ii) The construction of the ductwork and fans is such that, it will not be rendered inoperable by hot gases and smoke; and
 - iii) There is no danger of spread of smoke to other floors by the path of the extraction system which can be ensured by keeping the extraction fans running.
- e) For pressurized stair enclosure systems, the activation of the systems shall be initiated by signalling from fire alarm panel.
- f) Pressurization system shall be integrated and supervised with the automatic/manual fire alarm system for actuation.
- g) Wherever pressurized staircase is to be connected to unpressurized area, the two areas shall be segregated by 120 min fire resistant wall.
- h) Fresh air intake for pressurization shall be away (at least 4 m) from any of the exhaust outlets/grille.

Smoke Control:-

Smoke Exhaust and Pressurization of Areas above Ground -

Corridors in exit access (exit access corridor) are created for meeting the requirement of use, privacy and layout in various occupancies. These are most often noted in hospitality, health care occupancies and sleeping accommodations. Exit access corridors of guest rooms and indoor patient department/areas having patients lacking self-preservation and for sleeping accommodations such as apartments, custodial, penal and mental institutions, etc., shall be provided with 60 min fire resistance wall and 20 min self-closing fire doors along with all fire stop sealing of penetrations. Smoke exhaust system having make-up air and exhaust air system or alternatively pressurization system with supply air system for these exit access corridors shall be required. Smoke exhaust system having make-up and exhaust air system shall also be required for theatres/auditoria. Such smoke exhaust system shall also be required for large lobbies and which have exit through staircase leading to exit discharge. This would enable eased exit of people through smoke controlled area to exit discharge. All exit passageway (from exit to exit discharge) shall be pressurized or naturally ventilated. The mechanical pressurization system shall be automatic in action with manual controls in addition. All such exit passageway shall be maintained with integrity for safe means of egress and evacuation. Doors provided in such exit passageway shall be fire rated doors of 120 min rating. Smoke exhaust system where provided, for above areas and occupancies shall have a minimum of 12 air changes per hour smoke exhaust mechanism. Pressurization system where provided shall have a minimum pressure differential of 25-30 Pa in relationship to other areas. The smoke exhaust fans in the mechanical ventilation system shall be fire rated, that is, 250°C for 120 min. For naturally cross-ventilated corridors or corridors with operable windows, such smoke exhaust system or pressurization system will not be required.

Smoke Exhaust and Pressurization of Areas below Ground –

Each basement shall be separately ventilated. Vents with cross-sectional area (aggregate) not less than 2.5 percent of the floor area spread evenly round the perimeter of the basement shall be provided in the form of grills, or breakable stall board lights or pavement lights or by way of shafts. Alternatively, a system of mechanical ventilation system may be provided with following requirements:

- a) Mechanical ventilation system shall be designed to permit 12 air changes per hour in case of fire or distress call. However, for normal operation, air changes schedule shall be as given in Part 8 'Building Services, Section 3 Air Conditioning, Heating and Mechanical Ventilation' of the Code.
- b) In multi-level basements, independent air intake and smoke exhaust shafts (masonry or reinforced concrete) for respective basement level and compartments

- therein shall be planned with its make-up air and exhaust air fans located on the respective level and in the respective compartment. Alternatively, in multi-level basements, common intake masonry (or reinforced cement concrete) shaft may serve respective compartments aligned at all basement levels. Similarly, common smoke exhaust/outlet masonry (or reinforced cement concrete) shafts may also be planned to serve such compartments at all basement levels. All supply air and exhaust air fans on respective levels shall be installed in fire resisting room of 120 min. Exhaust fans at the respective levels shall be provided with back draft damper connection to the common smoke exhaust shaft ensuring complete isolation and compartmentation of floor isolation to eliminate spread of fire and smoke to the other compartments/floors.
- c) Due consideration shall be taken for ensuring proper drainage of such shafts to avoid insanitation condition. Inlets and extracts may be terminated at ground level with shall board or pavement lights as before. Stall board and pavement lights should be in positions easily accessible to the fire brigade and clearly marked 'AIR INLET' or 'SMOKE OUTLET' with an indication of area served at or near the opening.
 - d) Smoke from any fire in the basement shall not obstruct any exit serving the ground and upper floors of the building.
 - e) The smoke exhaust fans in the mechanical ventilation system shall be fire rated, that is, 250°C for 120 min.
 - f) The smoke ventilation of the basement car parking areas shall be through provision of supply and exhaust air ducts duly installed with its supports and connected to supply air and exhaust fans. Alternatively, a system of impulse fans (jet fans) may be used for meeting the requirement of smoke ventilation complying with the following:
 - 1) Structural aspects of beams and other down stands/services shall be taken care of in the planning and provisions of the jet fans.
 - 2) Fans shall be fire rated, that is, 250°C for 120 min.
 - 3) Fans shall be adequately supported to enable operations for the duration as above.
 - 4) Power supply panels for the fans shall be located in fire safe zone to ensure continuity of power supply.
 - 5) Power supply cabling shall meet circuit integrity requirement in accordance with accepted standard [4(13)].

The smoke extraction system shall operate on actuation of flow switch actuation of sprinkler system. In addition, a local and/or remote 'manual start-stop control/switch' shall be provided for operations by the fire fighters. Visual indication of the operation status of the fans shall also be provided with the remote control. No system relating to smoke ventilation shall be allowed to interface or cross the transformer area, electrical switchboard, electrical rooms or exits. Smoke exhaust system having make-up air and exhaust air system for areas other than car parking shall be required for common areas and exit access corridor in basements/underground structures and shall be completely separate and independent of car parking areas and other mechanical areas. Supply air shall not be less than 5 m from any exhaust discharge openings.

CAR PARKING FACILITIES: GENERAL

- a) Where both parking and repair operations are conducted in the same building, the entire building shall comply with the requirements for group G occupancies, unless the parking and repair sections are effectively separated by separation walls of 120 min.
- b) Floor surface shall be non-combustible, sloping towards drains to remove accumulation of water.
- c) Those parts of parking structures located within, immediately above or below, attached to, or less than 3 m away from a building used for any other purpose shall be separated by fire resistant walls and floors having fire resistance rating not less than 120 min. This shall exclude those incidental spaces which are occupied by cashier, attendant booth or those spaces used for toilets, with a total area not exceeding 200 m².
- d) Vehicle ramps shall not be considered as exists unless pedestrian facilities provided.

- e) Other occupancies like fuel dispensing, shall not be allowed in the building. Car repair facilities, if provided, shall be separated by 120 min fire resistance construction.
- f) In addition to fire protection requirements as per table 7, appropriate fire detection and suppressions systems shall be provided for the protection of hydraulic oil tank and pumps located below ground level for operation of car lifts.
- g) Means of egress shall meet the requirements specified

OPEN PARKING STRUCTURES (INCLUDING MULTY-LEVEL PARKING AND STILT PARKING)

- a) The term of open parking structure specifies the degree to which the structures exterior walls must have openings. Parking structures that meet the definition of the term open parking structure provide sufficient area in exterior walls to vent the products of combustion to a greater degree than enclosed parking structure.
- b) A parking structure having each parking level wall openings open to the atmosphere, for an area of not less than 0.4 m² for each linear meter of its exterior perimeter shall be constructed as open parking structure. Such openings shall be distributed over 40 percent of the building perimeter or uniformly over two opposing sides. Interior wall lines shall be at least 20 percent open, with openings distributed to provide ventilation, else, the structure shall be deemed as enclosed parking structures.

NOTE :- A car park located at the stilt level of a building (not open to sky) can be considered an open or an unenclosed car park if any part of the car park is within 30 m of a permanent natural ventilation opening and any one of the following is complied with towards the permanent natural ventilation requirement :-

- i. 50 percent of the car park perimeter shall be open to permanent natural ventilation.
- ii. At least 75 percent of car park perimeter is having the 50 percent natural ventilation opening.
- c) All stilt parking are required to be provided with sprinkler system where such buildings are required to be sprinklered.
- d) Open parking structures are not required to be provided with compartmentation.
- e) Open car parking (open to sky) within building complex having fire hydrant systems shall also need to be protected with yard hydrant installation system in accordance with good practice. [4(29)].

ENCLOSED PARKING STRUCTURES

- a) Those car parking structures which are enclosed on all sides and on top, not falling within the definition of open car parking [see H-3 (b)] and also those situated in the basements shall be known as enclosed car parking structures.
- b) All sprinklers in car parking shall be standard response type with minimum K-Factor of 80, area coverage of 9 m² and designed as per good practice [4(20)].
- c) For the basement car parking, compartmentation can be achieved, with fire barrier or with water curtain nozzle (K-23) or with combination thereof. Automatic deluge system comprising deluge valve, piping, nozzles, etc shall be used to zone the compartment in case of water curtain system. In case of water curtain, existing water storage shall be supplemented by water demand for water curtain nozzles for 60 min considering the largest compartments perimeter out of all compartments of car parking in any of the basements.
- d) The water supply for the water curtain nozzles shall be through independent electric pump of adequate capacity (flow and head) with piping/riser for the water supply to the nozzles.
- e) The water curtain shall be operated by the actuation of flow switch actuating sprinkler system.
- f) For smoke ventilation requirement of car parking.
- g) All fire exit doors from the car parking to exits shall be painted green and shall display exit signage.

Automated Car Parking Utilizing Mechanical or Computerized /Robotic Means

- a) Automated car parking structure can be of open parking type or enclosed types.
- b) Automated car parking facilities pose more hazard compared to manual parking due to following reasons:-
 - 1) High density of cars due to close stacking-one over another.

- 2) Lack of provision on fire separation/compartimentation-horizontal or vertical leading to rapid fire spread.
- 3) Non availability of any person to notice/control the fire in initial stages.
- 4) Limited access to firefighting personnel.
- 5) Extensive height and depth involved with highly combustible load.
- c) Fire escape staircases, at least 1250 mm wide shall be provided at appropriate locations so that no place is more than 45 m from the nearest staircase. Horizontal walkways, at least 1000 mm wide for access to all the areas shall be provided at every parking level.
- d) Travel distance and means of egress shall be governed by the respective sections of this code.
- e) The hazardous areas like DG sets, transformers, HT/LT panels for the parking lot shall be suitably segregated from the other areas as per requirements given this code and all such areas shall be protected by suitable automatic fire suppressions systems.

SERVICE DUCTS / REFUGE CHUTE:

1. Service duct shall be enclosed by walls and door, if any, of two hours fire rating. If ducts are larger than 10 Sq. Meters the floor should seal them, but provided suitable opening for the pipes to pass through, with the gaps sealed.
2. A vent opening at the top of the service shaft shall be provided between one fourth and one half of the area of the shaft. Refuge chutes shall have an outlet at least of wall of noncombustible material with fire resistance of not less than two hours. They shall not be located within the staircase enclosure or service shafts or air conditioning shafts. Inspection panel and door shall be tight fitting with one hour fire resistance; the chutes should be as far away as possible from exits.
3. Refuge Chutes shall not be provided in staircase walls and A/C shaft etc.

ELECTRICAL SERVICES:

1. For the requirements regarding installations from the point of view of Fire Safety, guidelines should be followed as mentioned in **IS Standard :1646 Code of practice for Fire safety Buildings : Electrical Installations.**
2. The electric distribution cables/wiring shall be laid in separate duct. The duct shall be sealed at every alternate floor with non-combustible materials having same fire resistance as that of the duct.
3. **Water mains, telephone lines, intercom lines, gas pipes or any other service lines shall not be laid in the duct of electric cables.**
4. Separate circuits for water pumps, staircase & corridor lighting shall be provided directly from the main switch gear panel and these circuits shall be laid in separate conduit pipes so that fire in one circuit will not affect the others.
5. The inspection panel doors and any other opening in the shaft shall be provided with **air tight doors having fire resistance of not less than 2hrs.**
6. Medium & low voltage wiring running in shaft and within fall ceiling shall run in metal conduit.
7. An independent & well-ventilated service room shall be provided on the ground floor with direct access from outside or from the corridor for the purpose of termination of electric supply. **The doors provided for the service room shall have fire resistance of not less than two hours.**

Electrical services shall conform to the following: (High Rise building)

- a) The electric distribution cables/wiring shall be laid in a separate duct. The duct 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;
- b) Water mains, telephone lines, intercom lines, gas pipes or any other service line shall not be laid in the duct for electrical cables; use of bus ducts/solid rising mains instead of cables is preferred;
- c) Separate circuits for firefighting pumps, lifts, staircases and corridor lighting and blowers for pressurizing system shall be provided directly from the main switch gear panel and these circuits shall be laid in separate conduit pipes, so that fire in one circuit will not affect the others. Such circuits shall be protected at origin by an automatic circuit breaker with its no-volt coil removed. Master switches controlling essential service circuits shall be clearly labeled;

out by this department and after satisfactory compliance "Final No Objection Certificate" will be issued. **This "Provisional No-Objection Certificate" will be treated valid for the period of one year from the date of issue.**

Details of "Fire Protection Fund Fees" are as follows:

	Total Amount	Advance "Fire Protection Fund fees" paid by M/s. Greenscape Reality. vide receipt no. MCH/0614/2018 Dt.18/01/2019	Balance "Fire Protection Fund fees" needs to be recovered by SPA
(i)	(ii)	(iii)	(iv)
Initial "Fire Protection Fund fees"	Rs. 9,95,745.00	Rs. 2,94,303.40	Rs. 7,01,441.60
Additional "Fire Protection Fund fees"	Rs. 1,31,99,629.00	Rs. 00.00	Rs. 1,31,99,629.00
Total	Rs. 1,41,95,374.00	Rs. 2,94,303.40	Rs. 1,39,01,070.60

The undersigned reserves the right to amend any additional recommendations deemed fit during the stage wise inspection due to the statutory provisions amended from time to time and in the interest of the protection of the company.

Thanking you.

Yours faithfully

Santosh S Warick
Digitally signed by Santosh S Warick
DN: cn=, ou=Government of Maharashtra, ou=Maharashtra Industrial Development Corporation, postalCode=400093, o=Maharashtra, st=Maharashtra, email=S.S.Warick@midc.gov.in, c=IN, serialNumber=778887881449, cn=Santosh S Warick
Date: 2019.04.12 16:00:41 +05'30'

(S.S. Warick)
Chief Fire Officer & Fire Adviser,
MIDC, Mumbai 400093.

Copy to The Deputy Engineer, MIDC, Sub Division Mahape (SPA), for information. He is requested to recover the Balance fees mentioned in column no. (iv) of above table before issuing work commencement certificate/plan approval.

Enclosure No. 07: Commencement Certificate Copy

MAHARASHTRA INDUSTRIAL DEVELOPMENT CORPORATION
(A Government of Maharashtra Undertaking)



No.EE/DN.II/MHP/SPA/ B41403/of 2019
Office of the Executive Engineer &
Special Planning Authority,
MIDC Division No.II,
Mahape , Navi Mumbai .
Date: - 24/04 / 2019.

To,
M/s. Greenscape Realty
Plot No. D-107,
TTC Industrial Area,
Navi-Mumbai.

Sub.:- TTC Industrial Area.

Building Plan Approval proposed IT Park Building on Plot No. D-107 in
TTC Industrial Area for M/s. Greenscape Realty

Ref.:1) Tracking Id No. SWC/14/521/20181206/592769.
2) Provisional Fire Noc. Vide No. MIDC/Fire/B32610 dtd. 12/04/2019.
3) Complied on 24/04/2019.

Dear Sir,

You have submitted application for Approval to Building Plan for proposed IT
Building. Above applications are examined and following approvals are hereby granted...

A) Building Plan Approval

Since you have paid following

I) **Development charges**, amounting Rs.25,49,811.60 vide Receipt No. MCH/0614/2018
dtd. 18/01/2019 & Rs. 29,96,841.40 vide Receipt No. MCH/2861/2019 dtd.22/04/2019,
Labour cess charges, amounting Rs.20,23,660.00 vide Receipt No. MCH/0614/2018
dtd. 18/01/2019 & Rs. 44,01,340.00 vide Receipt No. MCH/2861/2019 dtd.22/04/2019.

II) **Scrutiny fees**, amounting to Rs. 66,862.00 vide Receipt No. MCH/0614/2018
dtd. 18/01/2019.

III) **Enclosed Balcony premium** amounting Rs. 94,72,375.00 paid vide Receipt No.
HQC20000161 dt. 23/04/2019.

The set of plans, received from you vide your letter cited above, is hereby
approved subject to acceptance and follow up of following conditions by you.

- 1) You had submitted plans and drawings for **2709.60 m²** of plinth area for the plot
area of **5400.00 m²**, at present this office has approved plans only for total up to
date **4785.20 m²** of built up area(Gr.+ 11 upper floors). This office has approved
08 Nos. (Gr.+ 11 upper floors) of drawing details of which are mentioned on the
accompanying below statement.
2. In addition, to this approval the plot holder shall obtain approval for plans from other
requisite authorities as per necessity, such as from :-
The building plans needs to be got approved from :
i) Directorate of Industrial Safety & Health.
ii) Any other Govt. authorities which may be mandatory.

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Certificate copies of plans along with a letter for approval from the above authorities in triplicate shall be submitted/to the EE & SPA , before starting the work. This building plan approval is with respect to planning point of view and in accordance to MIDC's Development Control Rules, since MIDC is Special Planning Authority (SPA) for this Area.

3. You will obtain Environment Clearance Certificate before Commencement of any construction activities, if applicable to their project as per the notification issued by MoEF, Govt. of India vide Notification issued by MoEF, New Delhi dtd.14. 09. 2006 and its subsequent amendments'.
4. You are requested to submit certified copies of above approvals from the concerned authorities to this office, in triplicate before any work is started OR within three months from the date of issue of this letter whichever is earlier.
5. For the sanitary block, overhead water storage tank shall be provided at the rate of 500 liter per W.C. or Urinal.
6. For necessary approach road to the plot from the edges of MIDC. Road, 900 mm dia CD works or a slab drain of required span and size shall be provided.
7. Temporary structures shall not be allowed except to during construction period (after obtaining prior approval from Executive Engineer.) and the same shall be demolished immediately after building work is completed.
8. During the period of construction, stacking of materials shall be done only in the area of plot allotted. In no case, material be stacked along MIDC, road land width/open plot area.
9. The marks demarcating boundary of the plot shall be preserved properly and kept in good condition and shown to department staff as and when required.
10. No tube well, bore well or open well shall be dug.
11. Plans for any future additions, alterations or extensions will have to be get approved from this office, as well as from concerned competent authority.
12. The present approval to the plans does not pertain to approval to the structural design, RCC members, foundations etc. It is only locational approval to the layout of various structures & floors with reference to the plot, in accordance to MIDC DCR.
13. In case any power line is passing through the plot, the plot holder should approach MSEDCL and obtain their letter specifying the vertical and horizontal clearance to be left and plan his structures accordingly.
14. The compound wall gate should open inside the plot and if the plot is facing on two or more sides of the road then gate shall be located at least 15 m. away from the corner of junction or roads.
15. Plot holders shall make his own arrangement for 24 hours of storage of water, as uninterrupted water supply cannot be guaranteed.
16. In case, water stream/ nallah is flowing through the allotted plot, the plot holder has to ensure that the maximum quantity of rain water that flows at the point of entry of stream is allowed to flow uninterruptedly through the plot and upto the point of out flow of the original stream. The points of entry and exit of the natural stream shall not be changed. The detailed plans section and design for allowing maximum expected discharge of rain water through the plot have to be furnished to this office and no filling of plot and diversion of nalla is allowed unless a written permission is obtained from the Executive Engineer/SPA.
17. This permission stands cancelled, if no construction work is started within twelve months from the date of issue of this letter or the date given in the agreement to lease to start construction work whichever is earlier. The date of starting construction work and date of completion shall be informed to the Executive Engineer in charge immediately. The construction shall be completed within the given stipulated time limit as per the lease agreement.

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---- 3 ----

18. Breach of any rules stipulated will render the plot -holder liable for action as provided in MIDC., Act 1961 (II of 1962 and regulations made there under) and also terms of lease agreement and schedule of penalties prescribed by the Corporation for this purpose. This office is empowered to add, amend, vary or rescind any provisions of Building Rules & regulations from time to time as it may deem fit, and the plot-holder has to abide by these rules and regulations.
19. As soon as the building work is completed, the plot-holder shall approach to the concerned Deputy Engineer/Executive Engineer, to get the work verified and building shall not be occupied unless building completion certificate and occupancy certificate is obtained from this office.
21. The basement if provided is to be used only for storage purpose. No. manufacturing activates are allowed, similarly toilet is not allowed at the Basements.
22. The Name and plot number shall be displayed at main entrance of plot.
23. The plot holder shall construct STP treat & dispose effluent in main drainage lines.
24. The plot holder shall ensure that, the foundation of the building / structure Shall rest on the firm strata and not on made up / filled ground. The Architect and structural consultant appointed by the owner will be solely responsible for this condition.
25. MIDC issues permission for development of plots which are situated on river Banks, adhering to the contents of the River Policy dt. 13th July 2009 and as per category of Industries. PIL No. 17 of 2011 is filed against this policy at the Hon'ble High Court Bombay. It is clarified that, grant of any permission by the MIDC to any new industry in industrial estate situated on river banks will be subject to any further orders which may be passed by Hon'ble High Court, Bombay under PIL No. 17 of 2011.
26. Since you have consumed 0.89 of FSI as per the approved plan, you are requested to utilize remaining FSI as per agreement to lease.
27. Terms & Conditions as per ITpolicy-2016 will be applicable.

B] Drainage

i) Drainage Plan Approval (Internal Works)

The set of plans in triplicate received along with the letter under reference for the above work is scrutinized the proposal is approved subject to condition as follows:

The work of internal and external water supply and sanitary fittings etc for the Above building shall be carried out through the a licensed plumber registered at local Authority or of Environmental Engineering Department, or Govt. of Maharashtra.

1) The work should be carried out as per specifications confirming to I.S.S. In case they are not covered under I.S.S. then standard practice allowed by Municipal Corporation / or Local Council shall be followed.

2) The wastewater from water closets and urinals shall be passed through a septic tank of standard design.

3) The present approval to the plans does not pertain to the design of septic tank, effluent treatment plant etc. It is only location approval to these structures with reference to the plot.

4) You will be allowed to join your effluent to MIDC's common effluent collection system only after obtaining of necessary N.O.C. from M.P.C. Board and actual commissioning of pretreatment activity the factory effluent will be allowed to connect to MIDC system.

5) Overhead water tank shall be provided at the rate of 500 Liters per W.C. / Urinal provided.

6) The waste water from the closets and Urinals shall be passed through the septic Tanks, which is to be adequate to meet the requirements of the persons working in the factory and process waste if any, prior to septic tank in series with suitable size of 100 mm dia sewer trap, inspection chamber with 80 mm dia vent pipe shall be provided.

---- 4 ----

---- 4 ----

- 7) All vent pipes shall be minimum 80 mm dia size.
- 8) All rain water down take pipes shall be minimum 100 mm dia and should be provided at the rate of 1 Nos. Per 25 Sq. m. of roof area.
- 9) All S.W. pipes shall be minimum of 150 mm dia size.
- 10) It should be seen that no overflow of water from the soak pit or any process waste Enters in to adjoining property or road.
- 11) Rain water pipes are not to be connected to underground effluent collection system. Separate drainage system shall be provided for collection of Industrial and Domestic wastes. Manholes shall be provided at the end of collection system with arrangements for measurement of the flow.
- 12) In case any of the requirements, stated as above is violated by the plot holder then he is liable for disconnection of water supply and is liable for action provided under\ MIDC., Act and various regulations and as per provision in the lease agreement.
- 13) The completion of work as per above requirements, it shall be jointly, inspected by the concerned Deputy. Engineer, of MIDC and your representative who has designed and executed work, without which drainage completion certificate will not be issued.
- 14) The waste water after treatment shall be soaked in a soak pit, if sewer line is not Available for the plot; whereas if effluent collection system, of MIDC is functioning, then effluent shall be connected to the same after getting drainage plans approved from this office. The effluent shall be out letter only after pretreatment confirming to the standards stipulated by Maharashtra Pollution Control Board of Govt. of Maharashtra and after obtaining their consent under water Act 1974, Air Act 1981, & Hazardous waste Rules 2008 and subsequent amendments.

Thanking you,

Yours faithfully,

Maruti S
Kalkutaki

Executive Engineer &
Special Planning Authority
MIDC Division No.II, Mahape

- DA:- 1. One Statement showing details of drawings and built up area approved.
(Ground +11 upper floors)
2. Copy of approved drawing/plan.

Copy submitted to :

- The Collector, District Thane, for information.
- The Municipal Commissioner, N.M.M.C. for information.
- The Chief Fire Officer, MIDC, Andheri for information.

Copy f.w.c.'s to

- The Regional Officer, MIDC Mahape, for information.
- Architect Mr. Deepak Bhatija.

Copy to;

- The Deputy Engineer, MIDC, Sub Dn.I, Mahape, Navi Mumbai, for information.
- Guard File

MAHARASHTRA INDUSTRIAL DEVELOPMENT CORPORATION
(A GOVERNMENT OF MAHARASHTRA UNDERTAKING)

This statement is accompaniment to letter No. EE/DN.II/MHP/SPA/ B41403/ Of 2019 dtd. 24/04/2019 issued by M.I.D.C. Addressed to M/s. Greenscape Realty for Plot no. D-107 in TTC Industrial Area. Tracking ID: SWC/14/521/20181206/592769.

Name of Industrial Area :- TTC

Allottees Name: M/s. Greenscape Realty

Plot no. :- D-107

Sr. No	Dwg. No.	Name of Architect	Description	Ground Floor	1st Floor	2nd Floor	3rd Floor	4th Floor	5th Floor	6th Floor	7th Floor	8th Floor	9th Floor	10th Floor	11th Floor	Total BUA
				Area in sq.mt.	Area in sq.mt.	Area in sq.mt.	Area in sq.mt.	Area in sq.mt.	Area in sq.mt.	Area in sq.mt.	Area in sq.mt.	Area in sq.mt.	Area in sq.mt.	Area in sq.mt.	Area in sq.mt.	Area in sq.mt.
1	---		Demolition of Existing Building Vide No. B21506 dtd. 03/04/2019	---	---	---	---	---	---	---	---	---	---	---	---	2060.62
2	1 to 8	Mr. Deepak Bhatija, M/s. Deepak Bhatija, Architect CA/2004/32788 valid upto 31/12/2028	Fresh Plan Approval	538.20	2893.80 (FREE OF FSI)	2893.80 (FREE OF FSI)	2893.80 (FREE OF FSI)	2893.80 (FREE OF FSI)	2893.80 (FREE OF FSI)	120.51	758.17	870.05	870.05	870.05	758.17	4785.20
3		Total		538.20	2893.80	2893.80	2893.80	2893.80	2893.80	120.51	758.17	870.05	870.05	870.05	758.17	4785.20

Remarks

- | | | |
|------------------------------------|----|-------------------------------|
| 1. Plot Area | >= | 5400.00 sq.mt. |
| 3. 10% open space | >= | N.A. |
| 4. Explosive Area | >= | N.A. |
| 5. Plot Area (Net) | >= | 5400.00 sq.mt. |
| 6. Upto date ground coverage in m2 | >= | 2709.60 sq.mt. |
| 7. FSI in ground coverage | >= | 2709.60/5400.00 = 0.50 < 0.50 |
| 8. Total Built up area in m2 | >= | 4785.20 sq.mt. |
| 9. Total F.S.I. consumed | >= | 4785.20/5400.00 = 0.89 < 1.00 |

Maruti S Kalkutaki
Executive Engineer & SPA
MIDC, Sub-Division No. II,
Mahape, Navi Mumbai.



Enclosure No. 08: Consent to Establish Copy

MAHARASHTRA POLLUTION CONTROL BOARD				
Tel: 24010706/ 24010437 Fax: 24023516 Website: http://mpcb.gov.in E-mail: jdwater@mpcb.gov.in		Kalpataru Point, 2 nd - 4 th Floor Opp. Cine Planet Cinema, Near Sion Circle, Sion (E) Mumbai-400 022.		
Consent Order No: - Format 1.0/BO/JD(WPC)/UAN No. 0000060756 /CE/11thCC- 1905001243 Date - 17/05/2019				
To, M/s. Greenscape Realty, Plot No. D-107, TTC industrial Area, Shiravane ,Nerul ,Navi Mumbai ,Dist-Thane				
Subject: Grant of Consent to Establish for Residential cum commercial Construction Project in Red Category.				
Ref.: 1. Minutes of Consent Committee meeting held on 15/03/2019.				
Your application No. 0000060756 Dated 19/11/2018				
For: Grant of Consent to Establish under Section 25 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 6 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 is considered and the consent is hereby granted subject to the following terms and conditions and as detailed in the schedule I, II, III & IV annexed to this order:				
1. The Consent to Establish is valid for period up to commissioning or up to 5 year whichever is earlier.				
2. The capital investment of the project is Rs. 84.75/- Crs as per undertaking submitted by project proponent.				
3. The Consent to Establish is valid for Residential cum commercial construction project of M/s. Greenscape Realty, Plot No. D-107, TTC industrial Area, Shiravane ,Nerul ,Navi Mumbai ,Dist-Thane on total plot area of 5,400.00 Sqr. Mtrs. for total construction BUA of 41944.893 Sqr. Mtrs. as per Environmental Clearance including utilities and services.				
4. Conditions under Water (P&CP), 1974 Act for discharge of effluent:				
Sr. no.	Description	Permitted quantity of discharge (CMD)	Standards to be achieved	Disposal
1.	Trade Effluent	NIL	NA	NA
2.	Domestic Effluent	81	As per Schedule -I	The treated domestic effluent shall be 60% recycled for secondary purposes and remaining shall be utilized on land for gardening and connected to sewerage system provided by Local Body.
5. Conditions under Air (P& CP) Act, 1981 for air emissions:				
Sr. No.	Description of stack/ source	Number Of Stack	Standards to be achieved	
1	D.G. Set (600 KVA)	1	As Per Schedule -II	
6. Conditions under Municipal Solid Waste (Management and Handling) Rule, 2000:				
Sr. no.	Type Of Waste	Quantity	Treatment	Disposal
1	Biodegradable	222.61 Kg/Day	OWC	Used as Manure
"M/s. Greenscape Realty" SRO Navi Mumbai I UAN No. 0000060756 Page 1 of 6				

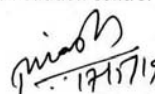
2	Non-Biodegradable	339.92 Kg/Day	Segregate	Hand over to Local Body for recycling
3	STP Sludge	10.00 Kg/Day	Drying	Used as Manure

7. Conditions under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 for treatment and disposal of hazardous waste

Sr. No.	Type Of Waste	Quantity	UOM	Treatment	Disposal
NIL					

8. The Board reserves the right to review, amend, suspend, revoke etc. this consent and the same shall be binding on the industry.
9. This consent should not be construed as exemption from obtaining necessary NOC/permission from any other Government authorities.
10. Project Proponent shall provide adequate capacity of sewage treatment plant so as to achieve treated domestic effluent standard for the parameter BOD- 10 mg/lit.
11. The treated domestic effluent shall be 60 % recycled for secondary purpose such as toilet flushing, air conditioning, cooling tower make up, firefighting etc. and reaming shall be utilized on land for gardening and connected to the sewerage system provided by local body.
12. Project Proponent shall install online monitoring system for pH, SS and flow at the outlet of Sewage Treatment Plant.
13. PP shall not take any effective steps prior to obtaining Environment Clearance and submit bank guarantee of Rs. 10 Lakhs towards compliance of the same and compliance of consent conditions.
14. Project Proponent shall submit an affidavit in Board's prescribed format within 15 days regarding the compliance of conditions of EC /CRZ clearance and C to E.
15. Project Proponent shall install organic waste digester along with composting facility/ bio-digester (biogas) with composting facility for the treatment of wet garbage.
16. This consent is issued subject to the order passed or as may be passed by the Hon'ble Supreme Court of India in special leave petition (Civil No. D23708/2017).

For and on behalf of the
Maharashtra Pollution Control Board



P.K.Mirashe
Member Secretary

Received Consent fee of –

Sr. No.	Amount	DR/ DD/ RTGS/ NEFT/ TXN No.	Bank Name	Date
1	Rs. 1,25,000/-	7616662	RTGS - Cosmos Co-op Bank	12.12.2018

Copy to:

- Regional Officer (Navi Mumbai)/ Sub-Regional Officer (Navi Mumbai-I), M.P.C. Board.
-They are directed to ensure the compliance of the consent conditions.
- Chief Accounts Officer, MPCB, Mumbai.
- CC/CAC desk- for record & website updating purposes.

Schedule-I

Terms & conditions for compliance of Water Pollution Control:

- 1) A) As per your application, you have proposed to provide Sewage Treatment Plants of designed capacity 90 KLD based on MBBR technology for the treatment of 325 CMD of domestic sewage.
- B) The Applicant shall operate the Sewage Treatment Plant (STP) to treat the sewage so as to achieve the following standards/ prescribed under EP Act, 1986 and Rules made there under from time to time, whichever is stringent:

Sr. No.	Parameters	Standards prescribed by Board
		Limiting Concentration in mg/l, except for pH
01	BOD (3 days 27°C)	10
02	Suspended Solids	20
03	COD	50
04	Residual Chlorine	1 ppm

- C) The treated domestic effluent shall be 60% recycled for secondary purposes such as toilet flushing, air conditioning, cooling tower make up, firefighting etc. and remaining shall be utilized on land for gardening and connected to the sewerage system provided by local body. In no case, effluent shall find its way to any water body directly/indirectly at any time. Project proponent shall provide flow meter to ensure 60% recycling of treated sewage and shall maintain the record with data logging system. PP shall achieve the treated domestic effluent standard for the parameter BOD- 10 mg/lit. The online monitoring data of the parameters Flow, BOD, TSS at the STP outlet shall be connected to MPCB Server.
- 1) The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification thereof & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system and/ or extension or addition thereto.
- 2) The industry shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.
- 3) The Applicant shall comply with the provisions of the Water (Prevention & Control of Pollution) Act, 1974 and as amended, and other provisions as contained in the said act.

Sr. no.	Purpose for water consumed	Water consumption quantity (CMD)
1	Industrial Cooling, spraying in mine pits or boiler feed	NIL
2	Domestic purpose	90.00
3	Processing whereby water gets polluted & pollutants are easily biodegradable	NIL
4	Processing whereby water gets polluted & pollutants are not easily biodegradable and are toxic	NIL

Schedule-II

Terms & conditions for compliance of Air Pollution Control:

1. As per your application, you have proposed to installed the Air pollution control (APC) system and also erected following stack (s) and to observe the following fuel pattern-

Sr. No.	Stack Attached To	APC System	Height in Mtrs.	Type of Fuel	Quantity & UoM	SO ₂ Kg/D
1	D.G. Set (600 KVA)	Acoustic Enclosure	6.0	HSD	25 Kg/Hr	12

2. The applicant shall operate and maintain above mentioned air pollution control system, so as to achieve the level of pollutants to the following standards:

Total Particulate matter	Not to exceed	150 mg/Nm ³
--------------------------	---------------	------------------------

3. The Applicant shall obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or replacement alteration well before its life come to an end or erection of new pollution control equipment.
4. The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).

Schedule-III						
Details of Bank Guarantees						
Sr. No.	Consent (C to E)	Amt of BG Imposed	Submission Period**	Purpose of BG #	Compliance Period	Validity
1	C to E	Rs.10 Lakh	15 Days	Towards compliance of EC & Consent to Establish conditions	CoU	CoU

* The above Bank Guarantee(s) shall be submitted by the applicant in favor of Regional Officer at the respective Regional Office within 15 days of the date of issue of Consent.

[Signature]

Maharashtra Pollution Control Board

"M/s. Greenscape Realty " SRO Navi Mumbai I UAN No. 00000060756

Page 5 of 6

Schedule-IV

General Conditions:

- 1) The applicant shall provide facility for collection of samples of sewage effluents, air emissions and hazardous waste to the Board staff at the terminal or designated points and shall pay to the Board for the services rendered in this behalf.
- 2) The firm shall strictly comply with the Water (P&CP) Act, 1974, Air (P&CP) Act, 1981 and Environmental Protection Act 1986 and Municipal Solid Waste (Management & Handling) Rule 2000, Noise (Pollution and Control) Rules, 2000 and E-Waste (Management & Handling) Rule 2011.
- 3) Drainage system shall be provided for collection of sewage effluents. Terminal manholes shall be provided at the end of the collection system with arrangement for measuring the flow. No sewage shall be admitted in the pipes/sewers downstream of the terminal manholes. No sewage shall find its way other than in designed and provided collection system.
- 4) Vehicles hired for bringing construction material to the site should be in good condition and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.
- 5) Conditions for D.G. Set
 - a) Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.
 - b) Applicant should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room should be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB (A) shall also be provided. The measurement of insertion loss will be done at different points at 0.5 meters from acoustic enclosure/room and then average.
 - c) Applicant should make efforts to bring down noise level due to DG set, outside their premises, within ambient noise requirements by proper siting and control measures.
 - d) Installation of DG Set must be strictly in compliance with recommendations of DG Set manufacturer.
 - e) A proper routine and preventive maintenance procedure for DG set should be set and followed in consultation with the DG manufacturer which would help to prevent noise levels of DG set from deteriorating with use.
 - f) D.G. Set shall be operated only in case of power failure.
 - g) The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set.
 - h) The applicant shall comply with the notification of MoEF dated 17.05.2002 regarding noise limit for generator sets run with diesel.
- 6) Solid Waste – The applicant shall provide onsite municipal solid waste processing system & shall comply with Municipal Solid Waste (Management & Handling) Rule 2000 & E-Waste (M & H) Rule 2011.
- 7) Affidavit undertaking in respect of no change in the status of consent conditions and compliance of the consent conditions the draft can be downloaded from the official web site of the MPCB.
- 8) Applicant shall submit official e-mail address and any change will be duly informed to the MPCB.
- 9) The treated sewage shall be disinfected using suitable disinfection method.
- 10) The firm shall submit to this office, the 30th day of September every year, the environment statement report for the financial year ending 31st march in the prescribed Form-V as per the provision of rule 14 of the Environmental (Protection) Second Amended rule 1992.
- 11) The applicant shall obtain Consent to Operate from the Board prior to commissioning of the Project.

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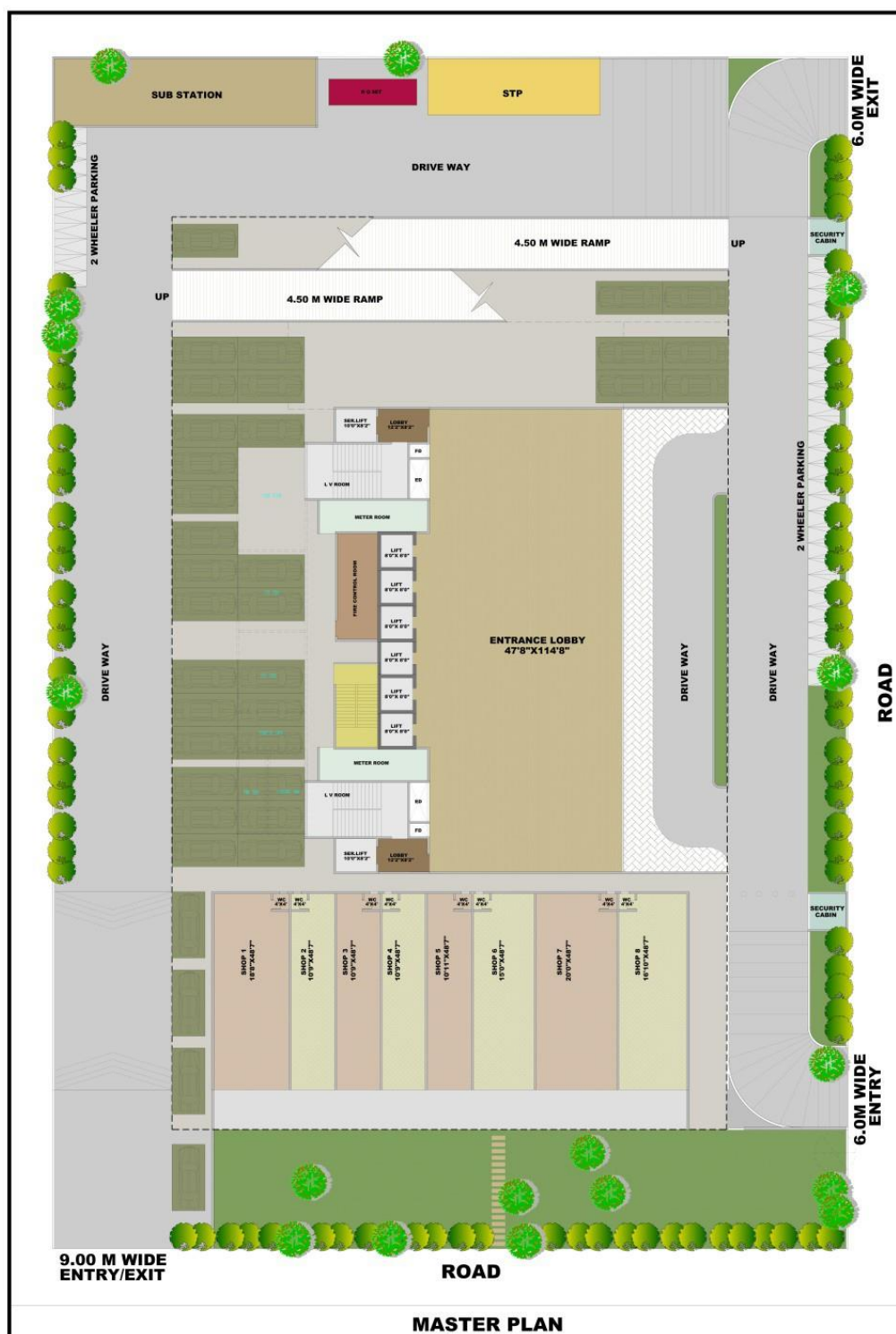
Enclosure No. 9: Sanitary and Hygiene Measures

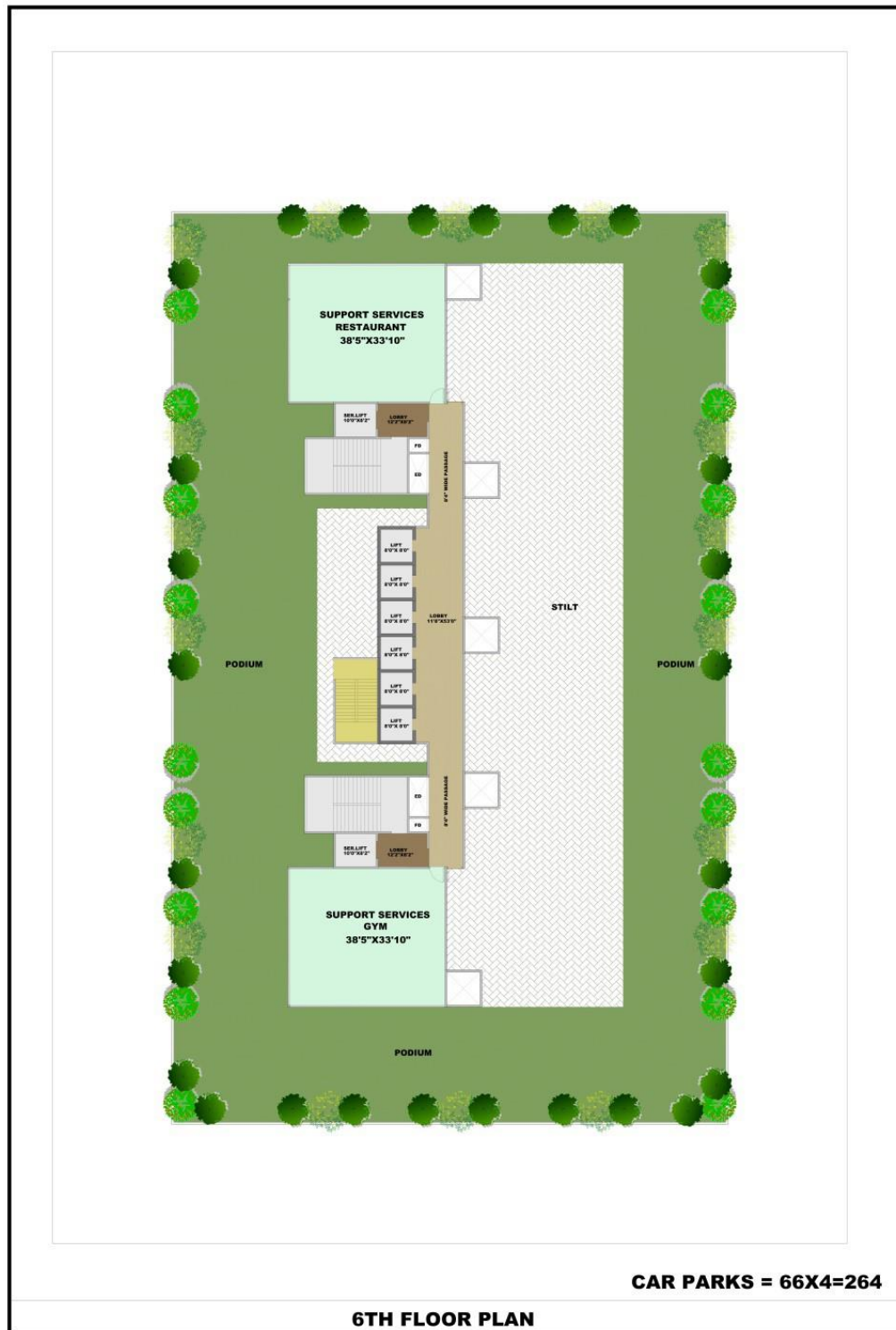
Sr. No.	Particulars	Details
1.	No. of Resident Workers	45
2.	No. of Non-Resident Workers	--
3.	No. of Hutments	17
4.	Facility provided to workers	
	1. No. of Toilets	04
	2. No. of Bathrooms	02
	3. Drinking water facility	Water Tank
	4. Light provision to hutments	MSEB Provision
	5. First Aid Box provision	Provided on site
	6. Cooking Facility	Own
	7. Provision of safety gadgets	Yes
	8. Barricading of site	Yes

Enclosure No. 10: Solid Waste Management

Facilities Provided	Waste Generation Norms		Basis of Assumption	Unit		Total Waste Generated (KG per day)
Commercial	0.25	kg/Capita/day	Guidelines for preparation for environmental impacts, CIWMB	180 (Shops) + 1687 (office) + 280 (Visitors) = 2147 Nos.	Persons	536.75
Garden space	0.003	kg/Sq. Mt./day	Discussion with Horticulturists	2095.504 (On ground- 565.504 and on podium- 1530.00)	Sq. Mt.	6.28
STP Sludge	250	kg per MLD of wastewater treated	Manual for Sewerage and Sewage treatment by CPHEEO		Million Liters per Day	2.25
Total Bio Degradable						218.11
Total Non-Bio Degradable						327.17
Total Waste Generated						545.28

Enclosure No. 11: Landscape Layout





Components	Proposed
Total green area on Ground Total green area on Sixth Floor Podium	565.504 Sq. M. 1530.00 Sq. M.
Existing tree cover if any	18 Nos.
No. of trees cut No. of trees transplant	01 Nos. 07 Nos.
No. of trees to be retained	10 Nos.
For cut down trees, No. of trees will be planted (1 Tree = 5 new tree) For transplant trees, No. of trees will be planted (1 Tree = 3 new tree)	5 Nos. 21 Nos.
Trees to be planted on Ground (1 trees/80 sq.mt of plot area)	68 Nos.
Total new trees to be planted	94 Trees

Enclosure No. 12: Monitoring Report



A-7/2/C-11, Capital City, Talwade - Chakan Road, Chakan MIDC, PH-V,
Village Nighoje, Tal. Khed, Dist. Pune-410 501, Maharashtra.
Mob + 9545084620, 8421365421 CIN No. : U74900PN2013PTC149666
E-mail : envirosafeyeng@gmail.com, gesecc12@gmail.com

Recognised by Ministry of Environment and Forests (MoEF) / Central Pollution Control Board Govt. of India (CPCB)
ISO 9001:2015, ISO 45001 : 2018 and ISO 14001 : 2015 Certified Company

TEST REPORT				
Test Report No: -	GESEC/PRO/AAQM/2024-25/11/423		Report Date	18/11/2024
Sample ID: -	GESEC/PRO/AAQM/2024-25/11/423			
Name & Address of the Customer	Greenscape Realty Plot No.D-107,TTC Industrial Area,Shiravane ,Nerul,Navi Mumbai			
Ambient Air Sample Details				
Type	Sampling Location	Sampling done by		
Ambient Air	Near Main Gate	GESEC		
Sampling Time				
Start Time	Stop Time	Total Hrs.		
10.10 am	06.10 pm	08 Hrs.		
Metrological Data/Environmental Conditions				
Ambient Temperature °C	28	Wet Bulb Temperature °C	25	
Dry Bulb Temperature °C	28	Relative Humidity % RH	59.21	
Date of Sampling	Sample Receipt Date	Analysis Start Date	Analysis End Date	
11/11/2024	12/11/2024	12/11/2024	18/11/2024	
Name of Instrument	Ambient Fine Dust Sampler	Date Of Calibration	25/10/2024	
Calibration Certificate No.	TECH/CAL/2022/03.B/19	Due Date of Calibration	24/10/2025	
Parameters	Method	Unit	NAAQ Standards	Result
Sulphur Dioxide (SO ₂)	IS:5182 (PART 2):2017	µg/m ³	≤ 80	19.54
Nitrogen Dioxide (NO ₂)	IS:5182 (PART 6):2018	µg/m ³	≤ 80	22.74
Particulate Matter PM ₁₀	IS:5182 (PART 4):2019	µg/m ³	≤ 100	51.52
Particulate Matter PM _{2.5}	IS:5182 (PART 24):2019	µg/m ³	≤ 60	21.9
Ozone(O ₃) For 1 Hrs.	Method 411, Air Sampling and Analysis 3 rd Edition ,2013	µg/m ³	≤ 180	11.24
Ammonia (NH ₃)	Method 401, Air Sampling and Analysis 3 rd Edition ,2013	µg/m ³	≤400	3.19
Carbon Monoxide (CO)	MASA-822 3rd Edition	µg/M ³	≤ 04	BDL
Benzene (C ₆ H ₆)	IS 5182 (Part 11) :2006 (RA 2017)	µg/M ³	≤ 05	BDL
Benzo(a)Pyrene (BaP)	CPCB Manual Vol 1 2011	ng/M ³	≤ 01	BDL
Arsenic (As)	MASA-822 3rd Edition	ng/M ³	≤ 06	BDL
Nickel (Ni)	MASA-822 3rd Edition	ng/M ³	≤ 20	BDL
Lead (Pb)	MASA-822 3rd Edition	µg/M ³	≤1.0	BDL
Remark- ➤ All above results are within National Ambient Air Quality standards.				



Hande
Mr. Vinod Hande
(Technical Manager)
Reviewed & Authorized By

Page 1 of 1

Terms and conditions

- The report is refer only to the sample tested and not applies to the bulk.
- The results shown in this test report may differ based on various factors including temperature, humidity, pressure, retention time etc.
- The test report cannot be reproduced wholly or in part and cannot be used for promotional or publicity purpose without the written consent of laboratory, GESEC.
- Samples will be retained for a period of seven (7) days after completion of analysis. Longer retention periods can be arranged, on request of the customer.
- We strictly maintain the confidentiality of all test result of sample(s) collected by us/ supplied by customer and not reveal to third party unless required by the statutory or legal requirement.
- MoEF approved Lab by Govt. of India. From date. 16/02/2024 to 04/12/2025.



A-7/2/C-11, Capital City, Talwade - Chakan Road, Chakan MIDC, PH-IV,
Village Nighoje, Tal. Khed, Dist. Pune-410 501, Maharashtra.
Mob+ 9545084620, 8421365421 CIN No. : U74900PN2013PTC149666
E-mail : envirosafetyeng@gmail.com, gesec12@gmail.com

Recognised by Ministry of Environment and Forests (MoEF) / Central Pollution Control Board Govt. of India (CPCB)
ISO 9001:2015, ISO 45001:2018 and ISO 14001:2015 Certified Company

TEST REPORT				
Test Report No: -	GESEC/PRO/ANLM/2024-25/11/424		Report Date	18/11/2024
Sample ID: -	GESEC/PRO/ANLM/2024-25/11/424			
Name & Address of the Customer	Greenscape Realty Plot No.D-107,TTC Industrial Area,Shiravane ,Nerul,Navi Mumbai			
Ambient Noise Sample Details				
Type	Ambient Noise			
Sampling done by	GESEC			
Standard method	As Per IS: 9989:2020			
Date of Sampling	Sample Receipt Date	Analysis Start Date	Analysis End Date	
11/11/2024	11/11/2024	12/11/2024	18/11/2024	
Name Of Instrument	Sound Level Meter	Date of Calibration	07/10/2024	
Calibration Certificate No.	SSEC/ME/259	Due Date of Calibration	06/10/2025	
Test Location	Unit	Average Noise Level Readings		CPCB Standards dB(A)
		Day	Night	
Near Main Gate	dB(A)	64.5	54.6	During Day time = 75 dB (A) During Night time = 70dB(A)
Remark- ➤ All above Noise level results are within Central Pollution Control Board Standards limit. ➤ Day/Night -75/70 dB.				
  Mr. Vinod Hande (Technical Manager) Reviewed & Authorized By				

END OF REPORT

Terms and conditions

- The report is refer only to the sample tested and not applies to the bulk.
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- Samples will be retained for a period of seven (7) days after completion of analysis. Longer retention periods can be arranged, on request of the customer.
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- MoEF approved Lab by Govt. of India. From date: 16/02/2023 to 04/12/2024.



A-7/2/C-11, Capital City, Talwade - Chakan Road, Chakan MIDC, PH-IV,
Village Nighoje, Tal. Khed, Dist. Pune-410 501, Maharashtra.
Mob+ 9545084620, 8421365421 CIN No. : U74900PN2013PTC149666
E-mail : envirosafetyeng@gmail.com, gesec12@gmail.com

Recognised by Ministry of Environment and Forests (MoEF) / Central Pollution Control Board Govt. of India (CPCB)
ISO 9001:2015, ISO 45001 : 2018 and ISO 14001 : 2015 Certified Company

TEST REPORT				
Test Report No - GESEC/PRO/W/2024-25/11/425		Date of Reporting		18/11/2024
Sample ID - GESEC/PRO/W/2024-25/11/425		Sample Details		Drinking Water
Name & Address of the Customer – Greenscape Realty Plot No.D-107,TTC Industrial Area,Shiravane ,Nerul,Navi Mumbai		Type of Sample		Water
		Volume Of Sample		1lit Plastic Bottle+ Glass Bottle
		Sample Status		Sealed
		Sample Collected By		GESEC
		Date of Sample Collection		11/11/2024
		Date of Sample received in lab		12/11/2024
		Analysis start Date		12/11/2024
		Analysis End Date		18/11/2024
WATER ANALYSIS REPORT				
Parameter	Result	Limits as per Is 10500:2012	Unit(s)	Standard Method
Physical Parameter				
Turbidity	<0.1	<1	NTU	IS:3025(part10):2019
TDS	71.9	<500	mg/lit	IS :3025 (part 16):2017
Color	<5	<5	Hazen	IS:3025 (part 4):2021
Chemical Parameter				
pH	7.10	6.5 to 8.5	--	APHA 4500 H+ B 23 rd Ed:2017
Total Hardness	23.65	<200	mg/lit	IS:3025 Part-21:2019
Total Alkalinity	19.07	<200	mg/lit	IS:3025 Part-23:2019
Sulphate	2.67	<200	mg/lit	IS:3025 Part-24:2019
Residual Chlorine	<0.1	<0.2	mg/lit	IS:3025(part 26):2019
Chloride	14.3	<250	mg/lit	IS:3025 Part-32:2019
Calcium (as Ca)	7.24	<75	mg/lit	IS:3025 Part-40:2019
Magnesium (as Mg)	3.98	<30	mg/lit	IS:3025 Part-46:2019
Elemental Analysis				
Iron as Fe	0.021	<0.3	mg/lit	IS:3025(part 2):2019
Microbiological Parameter				
Total Coliform	Absent	Absent	MPN/100ml	IS 1622:1981
E.coli.	Absent	Absent	per/100ml	IS 1622:1981
Remark(s):				
➤ The above water sample is Comply with required limit as per IS 10500:2012. ➤ For Total Coliform & E.coli. Absent can be consider as Zero [Refer IS:1622 (R.A.1996), Table No.-4]				
  Mr. Vinod Hande (Technical Manager) Reviewed & Authorized By				

END OF REPORT

Page 1 of 1

Terms and conditions

- The report is refer only to the sample tested and not applies to the bulk.
- The results shown in this test report may differ based on various factors including temperature, humidity, pressure, retention time etc.
- The test report cannot be reproduced wholly or in part and cannot be used for promotional or publicity purpose without the written consent of laboratory, GESEC.
- Samples will be retained for a period of seven (7) days after completion of analysis. Longer retention periods can be arranged, on request of the customer.
- We strictly maintain the confidentiality of all test result of sample(s) collected by us/ supplied by customer and not reveal to third party unless required by the statutory or legal requirement.
- MoEF approved Lab by Govt. of India. From date. 16/02/2023 to 04/12/2024

Enclosure No. 13: RWH tank details

CALCULATION OF RAIN WATER HARVESTING TANK	
Catchment Area – Roof tops / terraces	1233 Sq. Mt. approx.
Average no. of rainy days	80 days
Coefficient of run-off for Roof tops	0.90
Average rainfall per day	36.99 m ³
Rain water that can be harvested	33.29 m ³
Rain water Harvesting tank provided	35 Cu. M.

Enclosure No. 14: Environment Management Plan

Construction Phase

Sr. No.	Component	Impacts Identified	Suggested Mitigation Measures	Auditability	Responsibility
1.	Ambient Air Quality	Fuel consumption by vehicles causing exhaust air emission	Fuel used in equipment should meet BS IV specifications All machinery used should conform to IS 807:2006	PUC records Machinery maintenance records	Site In-charge
		Traffic congestion	The construction plan should be such that loading and unloading should be carried out at a designated place having easy access to entry and exit of the site.	Logistics plan	Security In-charge
		Pest control - use of insecticide by subcontractor	Application of integrated pest management techniques and controlled use of pesticides should be done in order to prevent damage to non-targeted species of pests. Adequate time should be allotted keep areas under pest control treatment to be quarantined from	Pest control records	Project Manager

			human contact		
2.	Water Resources and Quality	Domestic wastewater discharge (from pantry, flushing) to foul sewers	Adequate number of toilets (at least 8-10 toilets per 100 labours) with septic tanks and soak pits arrangements should be provided onsite by the contractor	Verification in audit records	Environment Health and Safety Manager
		Discharge of vehicle wash water	Vehicle washing should be carried out at designated isolated places on site so as to avoid any interference with the existing water bodies near the site.	Logistics plan	Site Supervisor
		Potential oil leakage	Construction equipment and machinery should be maintained and kept free from any possible leakages	Machinery maintenance records	Equipment Operator

3.	Noise Environment	Noise generated during site preparation Equipment selection Noise produced by vehicle	The noise generation activity should be carried out during normal working hours with adequate safety for workers and acoustic covering to all equipment Equipment selection should be done only after a comparative analysis. Obtaining an efficient and well-maintained equipment should be the approach of the contractor All vehicles deployed in construction activity should maintain noise below 85 dB as prescribed by the pollution control board. Vehicles used should be well lubricated and maintained in order to reduce unnecessary noise	Work shift records Noise monitoring Machinery maintenance records	Site Supervisor Project Manager Site Supervisor/ Contractor Security In-charge/Contractor
4.	Soil Environment	Soil Disturbances due to earth work	Soil compaction should be carried out using excavated earth so as to avoid soil loss and	Site records	Site Engineer

			degradation		
5.	Solid waste Management	Use of disposable materials (cups)	Use of hazardous materials should be done only as the requirement and should be stored in a secure place. Hazardous waste should be stored separately and should be collected by an authorized agency only after proper documentation.	MSDS records	Project Manager
		Use of hazardous materials (formaldehyde, lead paints, timber preservatives) and disposal of batteries and toner cartridges	Raw materials should be stored in areas away from direct impact of wind & water to avoid corrosion, erosion and quality degradation Dry storage and stacking in a closed container or room should be practiced	Storage Records	Project Manager
		Use of metal works, timber resources, thermal insulation and brickwork resources	Energy should be used only when required in order to prevent wastage. Renewable sources such as using daylight saving should be practiced and energy efficient equipment should be used at night.	Electric bills	Environment Health and Safety Manager

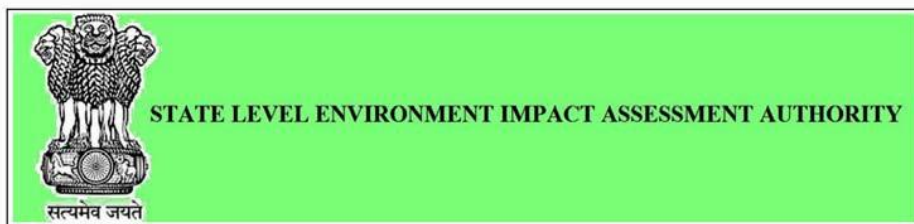
Operation Phase

Sr. No.	Component	Impacts Identified	Suggested Mitigation Measures	Auditability	Responsibility
1.	Air Quality	Emission from power backup/ DG sets Emissions from increase in traffic volume	Adequate stack height Maintenance Implementation of traffic management plan Vehicular speed limit to be maintained in order to reduce disturbance	Maintenance records	Facility Manager

2.	Water Quality	Increased load on fresh water sources Unplanned disposal of domestic waste water generated Inadequate management of storm water Spills, leaks from storage areas	Dual plumbing system will be adopted for reuse and recycle of water. Total 1 STP of 90 KLD capacity	STP maintenance record	Facility Manager
3.	Noise Environment	Increase in noise levels in residential areas due to Movement of vehicles Noise produced by vehicular movement	Ambient noise monitoring as per local norms will be carried out once in six months. Total 1 DG Set with Acoustic enclosure will be provided for emergency power back up. Traffic movement within the project should be proper so as to avoid congestion which leads to noise generation. Movement of vehicles should be smooth. Efficient driveways for reducing idling	maintenance record & monitoring records	

4.	Solid waste management and disposal	Inadequate collection and treatment of domestic waste Improper disposal of sludge	Biodegradable waste will be treated through OWC while dry waste will be handed over to authorized agency for disposal. Total 1 OWC will be provided for Biodegradable waste treatment. Generated sludge from the sewage treatment plant will be de-watered using filter press, dried and used for gardening purpose.	Maintenance records	
5.	Energy consumption and conservation	Electricity consumption (for lighting, air conditioning, office equipment and other purposes)	Energy saving fittings should be installed. Energy saving awareness should be carried out to optimize energy usage. Use of solar energy with targeted saving up to 7.5 %	Electric bills	

Enclosure No. 15: Environment Clearance Certificate



Environment department,
Room No. 217, 2nd floor,
Mantralaya, Annexe,
Mumbai- 400 032.
Date: November 10, 2019

To,
Greenscape Realty
at Plot No. D-107, TTC Industrial area, Shiravane, Nerul, Navi Mumbai.

Subject: Environment Clearance for Environment Clearance for Proposed Commercial IT Building development at Plot No. D-107, TTC Industrial area, Shiravane, Nerul, Navi Mumbai.

Sir,

This has reference to your communication on the above mentioned subject. The proposal was considered as per the EIA Notification - 2006, by the State Level Expert Appraisal Committee-II, Maharashtra in its 116th meeting and recommend the project for prior environmental clearance to SEIAA. Information submitted by you has been considered by State Level Environment Impact Assessment Authority in its 180th meetings.

2. It is noted that the proposal is considered by SEAC-II under screening category 8 (a) B2 as per EIA Notification 2006.

Brief Information of the project submitted by you is as below :-

1.Name of Project	Proposed Commercial IT Building Development
2.Type of institution	Private
3.Name of Project Proponent	Greenscape Realty
4.Name of Consultant	Building Environment (I) Pvt. Ltd.
5.Type of project	Commercial IT Building Development
6.New project/expansion in existing project/modernization/diversification in existing project	New Project
7.If expansion/diversification, whether environmental clearance has been obtained for existing project	Not applicable
8.Location of the project	Plot No. D-107, TTC Industrial area, Shiravane, Nerul, Navi Mumbai.
9.Taluka	Thane
10.Village	
Correspondence Name:	Suresh Ambavi Wavia
Room Number:	1908
Floor:	19
Building Name:	Cyber One
Road/Street Name:	-
Locality:	Sector-30A, Behind Odisha Bhavan, Vashi.
City:	Navi Mumbai
11.Whether in Corporation / Municipal / other area	MIDC
12.IOD/IOA/Concession/Plan Approval Number	Commencement Certificate IOD/IOA/Concession/Plan Approval Number: Part Commencement Certificate received: MIDC No.EE/DN.II/MHP/SPA/ B41403/of 2019; Dated- 24/04/2019 Approved Built-up Area: 41738.576
13.Note on the initiated work (If applicable)	NA
14.LOI / NOC / IOD from MHADA/ Other approvals (If applicable)	Commencement Certificate
15.Total Plot Area (sq. m.)	5400.00
16.Deductions	Nil
17.Net Plot area	5400.00

SEIAA Meeting No: 180 Meeting Date: November 7, 2019 (SEIAA-STATEMENT-0000003195)
SEIAA-MINUTES-0000002691
SEIAA-EC-0000002078

Page 1 of 12

Shri. Anil Diggikar (Member Secretary
SEIAA)

18 (a).Proposed Built-up Area (FSI & Non-FSI)	FSI area (sq. m.): 16170.900
	Non FSI area (sq. m.): 25567.676
	Total BUA area (sq. m.): 41738.576
18 (b).Approved Built up area as per DCR	Approved FSI area (sq. m.): 16170.900
	Approved Non FSI area (sq. m.): 25567.676
	Date of Approval: 01-01-1900
19.Total ground coverage (m2)	2709.60
20.Ground-coverage Percentage (%) (Note: Percentage of plot not open to sky)	50.18 %
21.Estimated cost of the project	847500000



Government of Maharashtra

SEIAA Meeting No: 180 Meeting Date: November 7, 2019 (SEIAA-
STATEMENT-0000003195)
SEIAA-MINUTES-0000002691
SEIAA-EC-0000002078

Page 2 of 12

Shri. Anil Diggikar (Member Secretary
SEIAA)

22. Production Details				
Serial Number	Product	Existing (MT/M)	Proposed (MT/M)	Total (MT/M)
1	Not applicable	Not applicable	Not applicable	Not applicable
23. Total Water Requirement				
Dry season:	Source of water	MIDC + STP treated water		
	Fresh water (CMD):	39.00		
	Recycled water - Flushing (CMD):	50.00		
	Recycled water - Gardening (CMD):	11.00		
	Swimming pool make up (Cum):	NA		
	Total Water Requirement (CMD):	100.00		
	Fire fighting - Underground water tank (CMD):	200.00		
	Fire fighting - Overhead water tank (CMD):	30.00		
Wet season:	Excess treated water	12.00		
	Source of water	MIDC + RWH + STP treated water		
	Fresh water (CMD):	5.71 (MIDC) + 33.29 (RWH) = 39.00		
	Recycled water - Flushing (CMD):	50.00		
	Recycled water - Gardening (CMD):	0.00		
	Swimming pool make up (Cum):	NA		
	Total Water Requirement (CMD):	89.00		
	Fire fighting - Underground water tank (CMD):	200.00		
Details of Swimming pool (If any)	Fire fighting - Overhead water tank (CMD):	30.00		
	Excess treated water	23.00		

24.Details of Total water consumed									
Particulars	Consumption (CMD)			Loss (CMD)			Effluent (CMD)		
Water Requirement	Existing	Proposed	Total	Existing	Proposed	Total	Existing	Proposed	Total
Domestic	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
25.Rain Water Harvesting (RWH)	Level of the Ground water table:			Ground water table is below 4 Meters hence recharge pits are not provided.					
	Size and no of RWH tank(s) and Quantity:			1 RWH tank of 35 KLD					
	Location of the RWH tank(s):			On Ground					
	Quantity of recharge pits:			NA					
	Size of recharge pits :			NA					
	Budgetary allocation (Capital cost) :			4.00 Lacs					
	Budgetary allocation (O & M cost) :			1.00 Lacs/ Year					
26.Storm water drainage	Details of UGT tanks if any :			U/G Tank for Domestic Water Supply- 44,000 litres U/G Tank for Flushing Water Supply- 54,000 litres					
	Natural water drainage pattern:			The storm drainage above ground will essentially cater for the seasonal rains. The major part of discharge will be from the roof. Rain water outlets will be provided at the edges from where it will be carried down by UPVC agriculture pipes to discharge water into storm water entrance chambers below ground. Dewatering submersible pumps inside the sumps will pump water from the sumps to storm water entrance chambers outside the basement below the ground. Run- off from the ground and terrace will be					
	Quantity of storm water:			0.13 cum/sec					
	Size of SWD:			0.45 x 0.6 m					
27.Sewage and Waste water	Sewage generation in KLD:			80 KLD					
	STP technology:			Microfiltration technology based on KSQ Flat sheet membrane					
	Capacity of STP (CMD):			1 STP of 90 KLD					
	Location & area of the STP:			On ground and area 72 Sq. Mtrs.					
	Budgetary allocation (Capital cost):			10 Lacs					
	Budgetary allocation (O & M cost):			4 Lacs/Year					

28.Solid waste Management		
Waste generation in the Pre Construction and Construction phase:	Waste generation:	Excavated soil will be used in land leveling purpose & construction debris will be handed over to authorized agency.
	Disposal of the construction waste debris:	Construction debris will be handed over to Authorized agency.
Waste generation in the operation Phase:	Dry waste:	327.17 Kg/day
	Wet waste:	218.11 Kg/day
	Hazardous waste:	NA
	Biomedical waste (If applicable):	NA
	STP Sludge (Dry sludge):	2.25 Kg/day
	Others if any:	NA
Mode of Disposal of waste:	Dry waste:	Dry waste will be handed over to authorize agency.
	Wet waste:	Composting through OWC & used at site as manure.
	Hazardous waste:	NA
	Biomedical waste (If applicable):	NA
	STP Sludge (Dry sludge):	Used as manure within the premises for plants. Excess shall be sold /handover to outside parties or gardens.
	Others if any:	E-waste (approx 3 T/Year)
Area requirement:	Location(s):	On ground
	Area for the storage of waste & other material:	30 Sq. Mt.
	Area for machinery:	30 Sq. Mt.
Budgetary allocation (Capital cost and O&M cost):	Capital cost:	7.50 Lacs
	O & M cost:	3.50 Lacs/ Year

Government of
Maharashtra

29.Effluent Charecterestics					
Serial Number	Parameters	Unit	Inlet Effluent Charecterestics	Outlet Effluent Charecterestics	Effluent discharge standards (MPCB)
1	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Amount of effluent generation (CMD):		Not applicable			
Capacity of the ETP:		Not applicable			
Amount of treated effluent recycled :		Not applicable			
Amount of water send to the CETP:		Not applicable			
Membership of CETP (if require):		Not applicable			
Note on ETP technology to be used		Not applicable			
Disposal of the ETP sludge		Not applicable			



Government of
Maharashtra

SEIAA Meeting No: 180 Meeting Date: November 7, 2019 (SEIAA-
STATEMENT-0000003195)
SEIAA-MINUTES-0000002691
SEIAA-EC-0000002078

Page 6 of 12


Shri. Anil Diggikar (Member Secretary
SEIAA)

30.Hazardous Waste Details							
Serial Number	Description	Cat	UOM	Existing	Proposed	Total	Method of Disposal
1	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

31.Stacks emission Details						
Serial Number	Section & units	Fuel Used with Quantity	Stack No.	Height from ground level (m)	Internal diameter (m)	Temp. of Exhaust Gases
1	--	High Speed Diesel ;Fuel Consumption :- @75% Load - 99Ltrs/Hour @100% Load - 132Ltrs/Hour Fuel Tank Capacity:- 990 Ltrs	--	3.42	0.3	--

32.Details of Fuel to be used				
Serial Number	Type of Fuel	Existing	Proposed	Total
1	Not applicable	Not applicable	Not applicable	Not applicable
Source of Fuel		Not applicable		
Mode of Transportation of fuel to site		Not applicable		

33.Energy		
Power requirement:	Source of power supply:	MSEDCL
	During Construction Phase: (Demand Load)	100 kW
	DG set as Power back-up during construction phase	100 kVA
	During Operation phase (Connected load):	2174 kW
	During Operation phase (Demand load):	1739 kW
	Transformer:	1000 kVA x 3 nos.
	DG set as Power back-up during operation phase:	600 kVA
	Fuel used:	HSD
	Details of high tension line passing through the plot if any:	NA

34.Energy saving by non-conventional method:	
Reduction in consumption by using Energy Saving Measure: 1. LED Light for Offices 2. LED Lights for Lift Lobby passage and Staircase 3. Saving in lift by using VFD 4. Solar Lighting for External Lighting 5. Solar Power for Lift Lobby passage and Staircase Lighting 6. Solar Power for Parking Lights	

36.Detail calculations & % of saving:		
Serial Number	Energy Conservation Measures	Saving %
1	Annual Saving only by Solar	7.5 %
2	Total Annual Saving	22 %

SEIAA Meeting No: 180 Meeting Date: November 7, 2019 (SEIAA-STATEMENT-0000003195) SEIAA-MINUTES-0000002691 SEIAA-EC-0000002078	Page 7 of 12	Shri. Anil Diggikar (Member Secretary SEIAA)
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37.Details of pollution control Systems							
Source	Existing pollution control system		Proposed to be installed				
Not applicable	Not applicable		Not applicable				
Budgetary allocation (Capital cost and O&M cost):	Capital cost:	25.00 Lacs					
	O & M cost:	1.00 Lacs/ Year					
38.Environmental Management plan Budgetary Allocation							
a) Construction phase (with Break-up):							
Serial Number	Attributes	Parameter	Total Cost per annum (Rs. In Lacs)				
1	PPE	--	5.00				
2	Site Sanitation Facility	--	4.00				
3	Drinking water Facility	--	2.00				
4	Solid Waste Management	--	2.50				
5	Safety railing, platform, ladder, crane, hoist etc.	--	6.00				
6	House Keeping	--	2.00				
7	Health check	--	1.00				
8	Environmental Monitoring	--	1.50				
9	Anti rust coating on foundation steel bars	--	5.00				
b) Operation Phase (with Break-up):							
Serial Number	Component	Description	Capital cost Rs. In Lacs	Operational and Maintenance cost (Rs. in Lacs/yr)			
1	Rain water harvesting (RWH)	--	4.00	1.00			
2	Sewage Treatment Plant (STP)	--	10.00	4.00			
3	Solid waste Management	--	7.50	3.50			
4	Landscaping	--	6.50	0.60			
5	Solar lighting	--	25.00	1.00			
6	DMP	--	315.71	27.78			
39.Storage of chemicals (inflammable/explosive/hazardous/toxic substances)							
Description	Status	Location	Storage Capacity in MT	Maximum Quantity of Storage at any point of time in MT	Consumption / Month in MT	Source of Supply	Means of transportation
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
40.Any Other Information							
No Information Available							

	CRZ/ RRZ clearance obtain, if any:	NA
	Distance from Protected Areas / Critically Polluted areas / Eco-sensitive areas/ inter-State boundaries	NA
	Category as per schedule of EIA Notification sheet	8 (a) B2
	Court cases pending if any	NA
	Other Relevant Informations	NA
	Have you previously submitted Application online on MOEF Website:	No
	Date of online submission	

3. The proposal has been considered by SEIAA in its 180th meeting & decided to accord environmental clearance to the said project under the provisions of Environment Impact Assessment Notification, 2006 subject to implementation of the following terms and conditions:

Specific Conditions:

I	PP informed that there is change in online CS with respect to date of approval of plan. PP to revise the same online also.
II	As shown during the presentation, PP to upload the Layout showing location of services including environmental infrastructure on the website immediately. PP to produce the same to SEIAA.
III	PP to ensure that, E-waste management should be as per E-waste management rule, 2016
IV	PP to increase the solar energy saving from 1.5 % to 4%.
V	PP to provide Fire hydrants along with necessary equipment on top of the podium and separate stair case which go direct to the podium for fire man.
VI	PP to abide the all conditions of CFO NoC.
VII	The PP to get NOC from competent authority with reference to Thane creek flamingo sanctuary if the project site falls within 10 Km radius from the said sanctuary boundary. The planning authority to ensure fulfilment of this condition before granting CC.
VIII	PP to submit CER (as per green field) prescribed by MoEF&CC circular dated 1.5.2018 relevant to the area and people around the project. The specific activities to be undertaken under CER to be carried out in consultation with Municipal Corporation or collector or Environment Department.
IX	PP to ensure that CER plan get approved from Municipal Commissioner/District Collector.
X	PP Shall comply with Standard EC conditions mentioned in the Office Memorandum issued by MoEF & CC vide E.No.22-34/2018-IA.III dt.04.01.2019.
XI	SEIAA decided to grant EC for - FSI:16170.900 m2, Non-FSI:25567.676 m2 and Total BUA: 41738.576 m2 (Plan Approval no-EE/DN-11/MHP/SPA/B41403/2019, Date-24.04.2019)

General Conditions:

I	E-waste shall be disposed through Authorized vendor as per E-waste (Management and Handling) Rules, 2016.
II	The Occupancy Certificate shall be issued by the Local Planning Authority to the project only after ensuring sustained availability of drinking water, connectivity of sewer line to the project site and proper disposal of treated water as per environmental norms.
III	This environmental clearance is issued subject to obtaining NOC from Forestry & Wild life angle including clearance from the standing committee of the National Board for Wild life as if applicable & this environment clearance does not necessarily implies that Forestry & Wild life clearance granted to the project which will be considered separately on merit.
IV	PP has to abide by the conditions stipulated by SEAC& SEIAA.
V	The height, Construction built up area of proposed construction shall be in accordance with the existing FSI/FAR norms of the urban local body & it should ensure the same along with survey number before approving layout plan & before according commencement certificate to proposed work. Plan approving authority should also ensure the zoning permissibility for the proposed project as per the approved development plan of the area.
VI	If applicable Consent for Establishment" shall be obtained from Maharashtra Pollution Control Board under Air and Water Act and a copy shall be submitted to the Environment department before start of any construction work at the site.
VII	All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase.

SEIAA Meeting No: 180 Meeting Date: November 7, 2019 (SEIAA-
STATEMENT-0000003195)
SEIAA-MINUTES-0000002691
SEIAA-EC-0000002078

Page 9 of 12


Shri. Anil Diggikar (Member Secretary
SEIAA)

VIII	Adequate drinking water and sanitary facilities should be provided for construction workers at the site. Provision should be made for mobile toilets. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.
IX	The solid waste generated should be properly collected and segregated. dry/inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material.
X	Disposal of muck during construction phase should not create any adverse effect on the neighboring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
XI	Arrangement shall be made that waste water and storm water do not get mixed.
XII	All the topsoil excavated during construction activities should be stored for use in horticulture / landscape development within the project site.
XIII	Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.
XIV	Green Belt Development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/ Agriculture Dept.
XV	Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.
XVI	Construction spoils, including bituminous material and other hazardous materials must not be allowed to contaminate watercourses and the dumpsites for such material must be secured so that they should not leach into the ground water.
XVII	Any hazardous waste generated during construction phase should be disposed off as per applicable rules and norms with necessary approvals of the Maharashtra Pollution Control Board.
XVIII	The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environment (Protection) Rules prescribed for air and noise emission standards.
XIX	The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from concern authority shall be taken.
XX	Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.
XXI	Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/MPCB.
XXII	Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September 1999 and amended as on 27th August, 2003. (The above condition is applicable only if the project site is located within the 100Km of Thermal Power Stations).
XXIII	Ready mixed concrete must be used in building construction.
XXIV	Storm water control and its re-use as per CGWB and BIS standards for various applications.
XXV	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
XXVI	The ground water level and its quality should be monitored regularly in consultation with Ground Water Authority.
XXVII	The installation of the Sewage Treatment Plant (STP) should be certified by an independent expert and a report in this regard should be submitted to the MPCB and Environment department before the project is commissioned for operation. Discharge of this unused treated effluent, if any should be discharge in the sewer line. Treated effluent emanating from STP shall be recycled/refused to the maximum extent possible. Discharge of this unused treated effluent, if any should be discharge in the sewer line. Treatment of 100% gray water by decentralized treatment should be done. Necessary measures should be made to mitigate the odour problem from STP.
XXVIII	Permission to draw ground water and construction of basement if any shall be obtained from the competent Authority prior to construction/operation of the project.
XXIX	Separation of gray and black water should be done by the use of dual plumbing line for separation of gray and black water.
XXX	Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.
XXXI	Use of glass may be reduced up to 40% to reduce the electricity consumption and load on air conditioning. If necessary, use high quality double glass with special reflective coating in windows.
XXXII	Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirement.
XXXIII	Energy conservation measures like installation of CFLs /TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Use CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the extent possible like installing solar street lights, common solar water heaters system. Project proponent should install, after checking feasibility, solar plus hybrid non-conventional energy source as source of energy.
XXXIV	Diesel power generating sets proposed as source of backup power for elevators and common area illumination during operation phase should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use low sulphur diesel. The location of the DG sets may be decided with in consultation with Maharashtra Pollution Control Board.

XXXV	Noise should be controlled to ensure that it does not exceed the prescribed standards. During nighttime the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.
XXXVI	Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.
XXXVII	Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code, which is proposed to be mandatory for all air-conditioned spaces while it is aspiration for non-air-conditioned spaces by use of appropriate thermal insulation material to fulfill requirement.
XXXVIII	The building should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.
XXXIX	Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings.
XL	Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it was found that construction of the project has been started without obtaining environmental clearance.
XLI	Six monthly monitoring reports should be submitted to the Regional office MoEF, Bhopal with copy to this department and MPCB.
XLII	Project proponent shall ensure completion of STP, MSW disposal facility, green belt development prior to occupation of the buildings. As agreed during the SEIAA meeting, PP to explore possibility of utilizing excess treated water in the adjacent area for gardening before discharging it into sewer line. No physical occupation or allotment will be given unless all above said environmental infrastructure is installed and made functional including water requirement in Para 2. Prior certification from appropriate authority shall be obtained.
XLIII	Wet garbage should be treated by Organic Waste Converter and treated waste (manure) should be utilized in the existing premises for gardening. And, no wet garbage will be disposed outside the premises. Local authority should ensure this.
XLIV	Local body should ensure that no occupation certification is issued prior to operation of STP/MSW site etc. with due permission of MPCB.
XLV	A complete set of all the documents submitted to Department should be forwarded to the Local authority and MPCB.
XLVI	In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Department.
XLVII	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.
XLVIII	Separate funds shall be allocated for implementation of environmental protection measures/EMP along with item-wise break-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the MPCB & this department.
XLIX	The project management shall advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the Marathi language of the local concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the Maharashtra Pollution Control Board and may also be seen at Website at http://ec.maharashtra.gov.in .
L	Project management should submit half yearly compliance reports in respect of the stipulated prior environment clearance terms and conditions in hard & soft copies to the MPCB & this department, on 1st June & 1st December of each calendar year.
LI	A copy of the clearance letter shall be sent by proponent to the concerned Municipal Corporation and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.
LII	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely: SPM, RSPM, SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sector parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
LIII	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.
LIV	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.

4. The environmental clearance is being issued without prejudice to the action initiated under EP Act or any court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision under EP Act or of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him, if any or action initiated under EP Act.
5. In case of submission of false document and non-compliance of stipulated conditions, Authority/ Environment Department will revoke or suspend the Environment clearance without any intimation and initiate appropriate legal action under Environmental Protection Act, 1986.
6. The Environment department reserves the right to add any stringent condition or to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the department or for that matter, for any other administrative reason.
7. Validity of Environment Clearance: The environmental clearance accorded shall be valid as per EIA Notification, 2006, and amendments by MoEF&CC Notification dated 29th April, 2015.
8. In case of any deviation or alteration in the project proposed from those submitted to this department for clearance, a fresh reference should be made to the department to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.
9. The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.
10. Any appeal against this Environment clearance shall lie with the National Green Tribunal (Western Zone Bench, Pune), New Administrative Building, 1st Floor, D- Wing, Opposite Council Hall, Pune, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Copy to:

1. SHRI JOHNNY JOSEPH, CHAIRMAN-SEIAA
2. SHRI UMAKANT DANGAT, CHAIRMAN-SEAC-I
3. SHRI M.M.ADTANI, CHAIRMAN-SEAC-II
4. SHRI ANIL .D. KALE, CHAIRMAN SEAC-III
5. SECRETARY MOEF & CC
6. IA- DIVISION MOEF & CC
7. MEMBER SECRETARY MAHARASHTRA POLLUTION CONTROL BOARD MUMBAI
8. REGIONAL OFFICE MOEF & CC NAGPUR
9. MAHARASHTRA STATE ELECTRICITY DISTRIBUTION CO. LTD

Shri. Anil Diggikar (Member Secretary SEIAA)

Government of
Maharashtra

SEIAA Meeting No: 180 Meeting Date: November 7, 2019 (SEIAA-
STATEMENT-0000003195)
SEIAA-MINUTES-0000002691
SEIAA-EC-0000002078

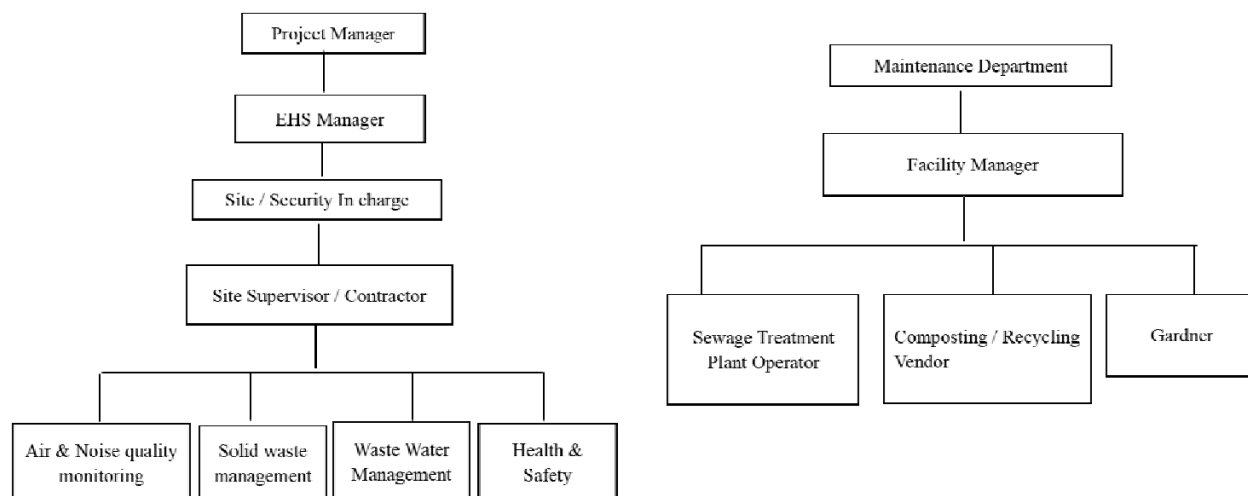
Page 12 of
12

Shri. Anil Diggikar (Member Secretary
SEIAA)

Enclosure No. 16: Environment Management Cell Structure

Sustainable Environmental Management Plan is prepared for this project. This plan provides guidelines for maintaining the quality of environment throughout the project's construction and operation phase. It highlights on environmental components which are likely to get affected due to the project, suggests good practices to control these likely damages.

The plan drafted in two stages that are construction and operation stage. PP will be responsible for executing this plan in *construction stage while the governing body formed in future* will be in charge of implementing the plan in *operation stage*.



Enclosure No. 17: Advertisement in regional news papers



सुवर्ण महोत्सवी वर्षानिमित्त महाविद्यालयाचे अजी-माजी विद्यार्थी एकत्रित येणार आहेत. या कार्यक्रमाचे नियोजन सुरू आहे. सर्व विद्यार्थ्यांनी यासाठी आपला सभाग नोंदवावा, त्या व्यक्तीने प्रवेश सुरू करावा.

महेंद्र धर्त, अध्यक्ष, माजी विद्यार्थी संघटना, महामा फुले महाविद्यालय

माजी विद्यार्थी व विकास समितीचे मदतीचे हात

महाविद्यालय आरंभीत विकास समितीने आपले मोलाचे योगदान दिले आहे. यामध्ये माजी अग्रधार विद्यार्थी वतुनेट पाटील, प्रकल्पप्रस्तुत नेते दिवंगत वि. पाटील, माजी खासदार रामरोठ ठाकूर, आमदार बाळराम पाटील, माजी नगराध्यक्ष जे. एम. धाने, कमणार नेते महेंद्र धर्त, प्रीतम धाने आदींसह महाविद्यालयाच्या असेस्य विद्यार्थ्यांनी महाविद्यालयाचे पारितोष्य अबाधित राखण्याचा सकारात्मक प्रयत्न केला आहे.

स्कारांनी सन्मानित : महामा फुले यला. विज्ञान व वाणिज्य महाविद्यालय पनवेलला विविध स्तरित करण्यात आले आहे. मुंबई विद्यापीठाचा उत्कृष्ट महाविद्यालय पुरस्कार (२०१०), महाराष्ट्र राज्य शासनाचा अभियान अंतर्गत विद्यार्थीउत्तरीय प्रथम पुरस्कार, स्वतः शिक्षण संस्थेचा आदर्श विद्यालय पुरस्कार, वा वेस्ट एन्वयरस युनिट पुरस्कार आदींसह विविध नामांकित पुरस्कारांचा यात समावेश आहे.

उत्तराविषयाचे काम या महाविद्यालयाच्या माध्यमातून सुरू आहे.

पनवेलच्या राजकारणात, समाजकारणात तसेच महत्वाच्या उद्योगधंद्यात पारंगत असलेले व्यावसायिक राजकारणी बहुतांशी याच महाविद्यालयातून पडले आहेत. सध्याच्या घडीला महाविद्यालयाचे शिक्षक कर्मचाऱ्यांचा दमक कार्यरत आहे. यात शिक्षकांची संख्या १०० च्या

आसपास आहे. महाविद्यालयाचे वंशचे सुवर्ण महोत्सवी वर्ष आहे. या महोत्सवासाठी महाविद्यालयात तयारी सुरू आहे. त्यासाठी महाविद्यालय विकास समितीसह माजी विद्यार्थ्यांनी पुढाकार घेतला आहे. या महोत्सवाकरीता स्वतः शिक्षण संस्थेचे अध्यक्ष व माजी केंद्रीय कुषिर्भरी शरद एवार यांच्यासह राज्याचे मुख्यमंत्री उद्धव ठाकरे, उपमुख्यमंत्री अनित पवार हे उपस्थित राहणार आहेत.

सुवर्ण महोत्सवी वर्षानिमित्त स्मार्ट क्लासकम, इंग्रालय येथेसाइट, कॅप सेटर, फोटो गॅलरी, ऑफिस रेकॉर्डरूप आदी प्रशस्त दान्यांचे उद्घाटनही करण्यात येणार आहे.

महाविद्यालयाचे सुवर्ण महोत्सवी वर्ष साजरे करण्यासाठी सर्व आजी-माजी विद्यार्थी एकत्रिते आहेत. स्वतः शिक्षण संस्थेच्या या महाविद्यालयात आगबर मोठ्या संख्येने विद्यार्थी घडने आहेत. या महोत्सवाच्या माध्यमातून महाविद्यालयाच्या अजी-माजी विद्यार्थ्यांना एकत्रित आणण्याच्या दृष्टीने कार्यक्रमाचे आयोजन करण्यात येत असल्याचे महाविद्यालयाचे प्राचार्य डॉ. गणेश ठाकूर यांनी स्पष्ट केले आहे. सुवर्ण महोत्सवी कार्यक्रमाची रूपरेषा स्पष्ट करण्यासाठी महाविद्यालयाच्या माध्यमातून सोमवारी एका पत्रकार परिषदेचे आयोजन करण्यात आले होते.

लोकमत न्यूज नेटवर्क

नवी मुंबई : अनीक्या व्यक्तीने एसी खोटीच्या घडामोडीने व्यक्तीला ४५ हजार रुपयांचा गंडा घातल्याचा प्रकार घडला आहे. या प्रकाराची चौपडलेणे पोलीस ठाण्यात गुन्हा दाखल करण्यात आला आहे. त्यांनी ओएलएससर केलेल्या जाहिरातीच्या माध्यमातून हा प्रकार घडला आहे.

कोपरखैरणेत राहणाऱ्या देवशिर मुनुमदार यांच्यासोबत हा प्रकार घडला आहे. काही दिवसांपूर्वी त्यांनी त्यांच्या घरातील जुना एसी व मोबाइल थिफ्रीसाठी काढला होता. त्याची जाहिरात त्यांनी ओएलएससर या संकेतस्थळावर केली होती. ही जाहिरात प्रसिद्ध करताच काही वेळातच त्यांना एका व्यक्तीचा फोन आला. त्याने एसी खोटी करण्यास इच्छुक असल्याचे सांगून, त्याचे पैसे पेटीएमने पाठवतो, असेही सांगितले. यानुसार सदर व्यक्तीने मुनुमदार यांच्या मोबाइलवर क्वडर कोड पाठवला. त्यांनी तो स्वीकारताच त्यांच्या खात्यातून तीन वेळा पैसे काढले गेले. त्याद्वारे मुनुमदार यांची ४५ हजार रुपयांची फसवणूक झाली आहे. ही बाब निदर्शनास येताच त्यांनी संबंधितासाठी संदर्क साधता असता ती झाली नाही. त्यामुळे आपली फसवणूक झाल्याचे लक्षात येताच त्यांनी कोपरखैरणे पोलीसठिकाडे तक्रार केली आहे. त्यानुसार एकाचिथार गुन्हा दाखल करण्यात आला असून पोलीस त्याचा शोध घेत आहेत. काही दिवसांपूर्वी एका व्यक्तीने घरातील फर्निचर थिफ्रीची जाहिरात ओएलएससरवर केली असत, त्यांना अशाच प्रकारे फसवले होते.

Public Notice

"Our Project "Greenscape Venture" at Plot no D-606/ 1A, TTC Industrial Area, MIDC, Navi Mumbai, Maharashtra has received Environment Clearance with Reference No. SEIAA-EC-0000001919 dated 3rd August, 2019. Copies of the clearance letters are available with the Maharashtra pollution control board and may also be seen on the website of <http://www.ecmpcb.in/>"

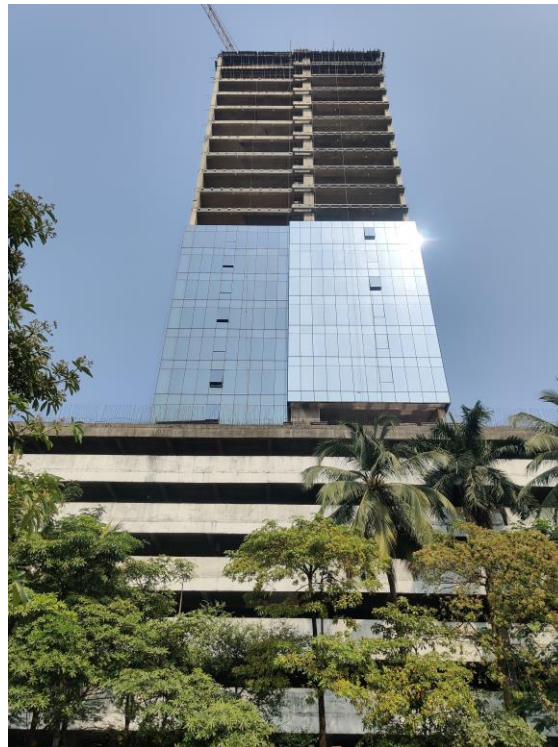
Public Notice

"Our Project "Greenscape Realty" at Plot no D-107, TTC Industrial Area, Shirvane, Nerul Navi Mumbai, Maharashtra has received Environment Clearance with Reference No. SEIAA-EC-0000002078 dated 10th November, 2019. Copies of the clearance letters are available with the Maharashtra pollution control board and may also be seen on the website of <http://www.ecmpcb.in/>"

Advertisement

[illegible]

Enclosure No. 18: Site Photographs





Enclosure No. 19: DATA SHEET WITH ANNEXURE A & B

Monitoring the Implementation of Environmental Safeguards

Ministry of Environment & Forest

Regional office (W), Nagpur

Monitoring Report

**PART-I
DATA SHEET**

1.	Project Type : River- Valley/ Mining/ Industry/ Thermal/ Nuclear/ Other (Specify)		:	Proposed IT building project by M/s. Greenscape Realty
2.	Name of the Project		:	Proposed IT building project by M/s. Greenscape Realty Plot No. D-107, TTC Industrial area, Shiravane, Nerul, Navi Mumbai
3.	Clearance letter (s)/OM No. and Date		:	SEIAA-EC-0000002078 dated November 10, 2019
4.	Location		:	
	a.	District (S)	:	Thane
	b.	State (S)	:	Maharashtra
	c.	Latitude/Longitude	:	Latitude: 19°02'40.4"N Longitude: 73°01'40.8"E
5.	Address for correspondence		:	Mr. Suresh Wavia M/s. Greenscape Realty 1908, Cyber One, Sector-30A, Behind Odisha Bhavan, Vashi, Navi Mumbai

	a.	Address of concerned Project Chief Engineer (with pin code & Telephone/ telex/ fax numbers)	:	Plot No. D-107, TTC Industrial area, Shiravane, Nerul, Navi Mumbai
	b.	Address of Executive Project: Engineer/Manager (with pin code & Telephone/ telex/ fax numbers)	:	Plot No. D-107, TTC Industrial area, Shiravane, Nerul, Navi Mumbai
6.	Silent Features		:	
	a.	Of the project	:	Annexure A
	b.	Of the Environment Management Plan	:	Annexure B
7.	Breakup of the Project Area		:	
	a.	Submerged area forest & non- forest	:	Project site is not a forest area
	b.	Others	:	Annexure A
8.	Breakup of the project affected population with enumeration of those losing houses/dwelling units, Only agricultural land, both Dwelling units & agricultural land & landless Labourers/artisan.		:	Not Applicable
	a.	SC, ST/Adivasis	:	Not Applicable
	b.	Others (Please Indicate whether these figures are based on any scientific and systematic survey carried out Or only provisional figures, if a Survey is carried out give details and years of survey)	:	Not Applicable
9.	Financial Detail		:	
	a.	Project cost as originally planned and subsequent revised estimates and the	:	84.75 Crs

		year of price reference.		
	b.	Allocation made for environ-mental management planes with item wise and year wise Break-up.	:	--
	c.	Benefit cost ratio/Internal rate of Return and the year of assessment.	:	-
	d.	Whether (c) includes the cost of Environmental Management as shown in the above.	:	-
	e.	Actual expenditure incurred on the Environment Management Plan so far.	:	--
10.	Forest Land Requirement		:	
	a.	The status of approval for diversion of forest land for non-forestry use	:	Not Applicable
	b.	The status of clearing felling	:	Not Applicable
	c.	The status of compensatory afforestation, if any	:	Not Applicable
	d.	Comments on the viability & sustainability of compensatory afforestation program in the light of actual field experience so far	:	Not Applicable
11.	The status of clear felling in non-forest areas (such as submergence area of reservoir, approach roads) if any with quantitative information.		:	Not Applicable
12.	Status of Construction		:	
	a.	Date of commencement (Actual and/or planned)	:	Construction started post receive of Environment Clearance, Consent to Establish and Commencement certificate

	b.	Date of completion (Actual and/ or planned)	:	--
13.		Reasons for the delay if the project is yet to start	:	--
14.		Details of Site visits	:	
	a.	The dates on which the project monitored by the Regional Office on previous Occasions, if any	:	--
	b.	Date of site visit for this monitoring report	:	18.11.2024
15.		Details of correspondence with project authorities for obtaining Action plans/information on status of compliance to safeguards other than the routine letters for logistic support for site visits	:	--
		(The first monitoring report may contain the details of all the Letters issued so far, but the Later reports may cover only the Letters issued subsequently.)	:	-

ANNEXURE-A

PROJECT DETAILS

Name & Location	:	Plot No. D-107, TTC Industrial area, Shiravane, Nerul, Navi Mumbai
Total no. of workers to be employed during the construction phase.	:	45 Nos.
Total Project cost	:	Rs. 84.75 Crores
Project infrastructure	:	1 Building with 1 wing: Ground + 1 st to 5 th Floor Parking podiums + 6 th Floor Landscape podium + 7 th to 25 th Floors
Area Statement	:	Total Plot Area: 5400.00 Sq. Mt.

		Total Construction BUA: 41738.576 Sq. mt. Green area on the ground: 565.504 Sq. Mt. (10.47%) Green area on 6th Floor Podium: 1530.00 Sq. Mt.
Water requirement and Sources	:	Source: MIDC <u>During Operation Phase-</u> Domestic: 39.00 KLD Flushing: 50.00 KLD Landscaping: 11.00 KLD Total Water demand: 100.00 KLD
Sewage generated	:	Waste water generated: 80 m³/day STP Technology: Microfiltration Technology based on KSQ Flat Sheet Membrane (90 m³/day Capacity).
Power	:	Source: MSEDCL During Operation Phase Connected Load: 2174 Kw Maximum Demand Load: 1739 Kw Transformer: 3 Nos. of 1000 kVA DG capacity: 1 DG set of 600 kVA
Gaseous emission	:	• Vehicle carrying materials to be transported must have PUC certificate. • Heavy vehicle movement will be allowed only during night time. • Construction equipment with idling control technologies will be used. • Regular maintenance of the equipment will be carried out.
Solid waste from: Garbage:	:	a. Wet waste: 218.11 Kg/day b. Dry waste: 327.17 Kg/day

1. Wet 2. Dry		c. STP sludge (Dry sludge): 2.25 Kg/day
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ANNEXURE-B

EMP FOR CONSTRUCTION PHASE

Sr. No.	Environmental component	Activity	Impacts	Precautionary measures
1.	Ambient Air Quality & Noise level	❖ Site Clearance ❖ Excavation ❖ Construction of structures ❖ Heavy vehicles traffic ❖ Use of DG set ❖ Open burning of waste.	❖ Increased level of dust & other air pollutants ❖ Increased Noise level.	For controlling air pollution ❖ Use of RMC in enclosed container. ❖ Construction activities shall not be permitted at night. ❖ Dust covers shall be provided on trucks that would be used for transportation of materials prone to fugitive emission. Also water sprinkling on ground will be done. ❖ Mitigation measures shall include regular maintenance of machinery and provision of personnel protective equipment to workers where needed. For controlling noise pollution ❖ Use of equipment generating noise of not greater than 90 dB (A). ❖ High noise generating construction activities would be carried out only during day time. ❖ Installation, use and maintenance of mufflers on equipment.

				❖ Acoustic enclosures for DG sets and ear muffs will be provided for workers working near high noise construction machinery.
2.	Water	❖ Use of fresh water for construction activity/ labours ❖ Wastewater generation ❖ Disposal of site Run off into SWD ❖ Water logging	❖ Strain on the water supply in the vicinity ❖ Sedimentation ❖ Pollution of nearby water courses ❖ Unhygienic condition for surrounding residents.	❖ The sewage shall be treated in full-fledged Sewage treatment plant and treated sewage shall be reused for in- house flushing and landscaping. ❖ The storm water Management. ❖ Rain Water Harvesting.
3.	Soil	❖ Preconstruction and excavation debris ❖ Storage of construction material/ chemicals ❖ Transportation of hazardous material ❖ Residual paints Solvents/ bituminous material etc. ❖ Heavy vehicle operation/ maintenance ❖ Generation of garbage by Labourers	❖ Loss of good fertile soil ❖ Soil erosion, ❖ Soil contamination due to mixing of construction material/ accidental spillage of chemicals/oils	❖ Separate storage of Debris & Construction material ❖ Segregation of garbage
	Even after taking precautions if soil is found to be contaminated, it shall be removed and disposed off to authorized site.			
4.	Ecology	❖ Site clearance, ❖ Construction of structures ❖ Cutting of trees.	❖ Disturbing natural flora and fauna ❖ Loss of vegetation from chemical spills from vehicles	❖ Tree plantation
5.	Socio economic	❖ Construction work ❖ Labour hutments	❖ Positive impact Employment	❖ Adequate drinking water, toilet and bathing

	environment		generation ❖ Safety and hygiene at site may be affected during construction	facilities. ❖ Personal protective and safety equipment will be provided. ❖ First aid facility for construction workers. ❖ Regular health checks up of workers. ❖ Regular pest control will be done on site. ❖ Educational and awareness program for firefighting and safety measures.
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EMP FOR OPERATION PHASE

Sr. No.	Environmental component	Activity	Impacts	Precautionary measures
1.	Ambient Air Quality & Noise level	❖ Increased vehicular trips, Use of DG sets	❖ Traffic congestion, ❖ Air Pollution, ❖ Increase in noise level.	For controlling air pollution ❖ No direct impact on air environment For controlling noise pollution ❖ Compound wall and rows of trees to act as noise buffer ❖ DG sets with Sound proof Enclosure with dB (A) level not greater than 75 dB (A).
2.	Water	❖ Increased demand of natural water, ❖ Generation of waste water ❖ Increased paved structure	❖ Stress on existing water supply ❖ Pollution of water bodies ❖ Increased run off from site.	❖ The sewage shall be treated in full-fledged Sewage treatment plant and treated sewage shall be reused for in-house flushing and landscaping. ❖ The storm water Management. ❖ Rainwater Harvesting.
3.	Land	❖ Solid waste generation, ❖ Transportation of hazardous material	❖ Improper disposal of waste, ❖ Accidental spillage of hazardous chemicals leads to soil	❖ Rain water harvesting ❖ Recycling of water through STP ❖ Storm water drainage will be properly

		❖ Increased paved structure	contamination ❖ Increased run off from site.	maintained.
	Even after taking precautions if soil is found to be contaminated, it shall be removed and disposed off to authorized site.			
4.	Ecology	❖ Introduction of new tree species	❖ Disturbing natural flora and fauna ❖ Increased Exposure to anthropogenic activities.	❖ Landscaping and tree plantation at periphery
5.	Socio economic environment	❖ Development of new land use, influx of people	❖ Stress on all utilities, risk and danger due to natural and manmade disaster ❖ Positive impact Employment generation	❖ Implementation of firefighting and safety measures ❖ Environmental awareness programme for surrounding area ❖ Emergency preparedness plan will be explained

HAZARDOUS WASTE MANAGEMENT PLAN

CONSTRUCTION PHASE:

Environmental Management Plan for Hazardous Waste Generation

Sr. No.	Source of Hazardous Waste Generation	Mitigation Measures
1.	Leakages and spillage oil or fuel	❖ Contaminated soil if any shall be disposed off to Authorized Disposal site. ❖ Bituminous materials/ any other chemicals shall not be allowed to leach into the soil.
2.	Residual Paints/ Solvents	---do---

Other hazardous wastes, if any, shall also be handled in the similar way through authorized dealers only.

OPERATIONAL PHASE:

Sr. No.	Source of Hazardous Waste Generation	Mitigation Measures	Disposal
1.	Waste Oil from D.G. Sets	-	❖ Waste oil will be handed over to authorized recyclers.