Annexure No. 01: Environment Clearance copy

STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY

सत्यमेव जयते

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

To,
Ameet Nayak
at 5 & 5A, Kalwa Industrial Area, MIDC, Thane, Belapur Road, Airoli –Navi Mumbai, Thane 400708

Subject: Environment Clearance for Proposed Data Center Park

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 114th 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 8a (B2) as per EIA Notification 2006.

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

1.Name of Project	Proposed Data Center Park by Data Center Holdings India LLP
2.Type of institution	Private
3.Name of Project Proponent	Ameet Nayak
4.Name of Consultant	M/s Sneha Hi-Tech Products, Banglore
5.Type of project	Data Center Park with Office Building
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	5 & 5A, Kalwa Industrial Area, MIDC, Thane, Belapur Road, Airoli –Navi Mumbai, Thane 400708
9.Taluka	Thane
10.Village	Kalwa
Correspondence Name:	Ameet Nayak
Room Number:	--
Floor:	--
Building Name:	K1, Phase III, Country park
Road/Street Name:	Dattapada Road
Locality:	Opp. Tata Steel, Borivali (East)
City:	Mumbai
11.Whether in Corporation / Municipal / other area	MIDC
12.IOD/IOA/Concession/Plan Approval Number	IOD
	IOD/IOA/Concession/Plan Approval Number: EE/MHP-II/TTC/B-76038/of'19 For proposed FSI 86,205.104 Sq.m
	Approved Built-up Area: 109368.983
13.Note on the initiated work (If applicable)	NA
14.LOI / NOC / IOD from MHADA/ Other approvals (If applicable)	NA
15.Total Plot Area (sq. m.)	62,490.00 Sq.m.
16.Deductions	NA
17.Net Plot area	62,490.00 Sq.m.

18 (a).Proposed Built-up Area (FSI & Non-FSI)	**FSI area (sq. m.):** 86,205.104
	Non FSI area (sq. m.): 23,163.869
	Total BUA area (sq. m.): 109368.983
18 (b).Approved Built up area as per DCR	**Approved FSI area (sq. m.):** 86,205.104
	Approved Non FSI area (sq. m.): 23,163.869
	Date of Approval: 27-05-2019
19.Total ground coverage (m2)	27,941.84
20.Ground-coverage Percentage (%) (Note: Percentage of plot not open to sky)	44.71%
21.Estimated cost of the project	16875000000

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
	Fresh water (CMD):	81 (Drinking + Filter backwash + wash down points + AC, DG make up water)
	Recycled water - Flushing (CMD):	9
	Recycled water - Gardening (CMD):	62
	Swimming pool make up (Cum):	NA
	Total Water Requirement (CMD) :	152
	Fire fighting - Underground water tank(CMD):	500
	Fire fighting - Overhead water tank(CMD):	10
	Excess treated water	00
Wet season:	**Source of water**	MIDC
	Fresh water (CMD):	81 (Drinking + Filter backwash + wash down points + AC, DG make up water)
	Recycled water - Flushing (CMD):	9
	Recycled water - Gardening (CMD):	00
	Swimming pool make up (Cum):	NA
	Total Water Requirement (CMD) :	90
	Fire fighting - Underground water tank(CMD):	500
	Fire fighting - Overhead water tank(CMD):	10
	Excess treated water	00
Details of Swimming pool (If any)	NA	

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	--	--	--	--	--	--	--	--	--

25.Rain Water Harvesting (RWH)	**Level of the Ground water table:**	9-10 m
	Size and no of RWH tank(s) and Quantity:	Rain water storage tanks – 165 Cub-m x 4 nos. = 660.0 Cub-m
	Location of the RWH tank(s):	Adjacent to office building .
	Quantity of recharge pits:	--
	Size of recharge pits :	--
	Budgetary allocation (Capital cost) :	55 Lakh
	Budgetary allocation (O & M cost) :	1.8 Lakh/annum
	Details of UGT tanks if any :	Domestic UG tank Capacity (cum) :120 Flushing tank Capacity(cum): Part of S.T.P treated water storage tank. Capacity 8.5 Cub-m, Size : 2.1 x 2.1 x 1.95 m effective depth. Fire UG tank Capacity (cum): 500
26.Storm water drainage	**Natural water drainage pattern:**	Natural slope towards Thane Belapur road
	Quantity of storm water:	13.58 m3/min incremental run off
	Size of SWD:	As per plan. Internal storm water drainage size of 450mm dia and external storm water drainage size of 600mm dia
27.Sewage and Waste water	**Sewage generation in KLD:**	74
	STP technology:	MBR (Membrane Bio Reactor)
	Capacity of STP (CMD):	50 KLD x 2 nos.
	Location & area of the STP:	Near to exit gate, area approx. 200 sqm.
	Budgetary allocation (Capital cost):	12 Lakh
	Budgetary allocation (O & M cost):	0.6 lakh/annum

28.Solid waste Management

Waste generation in the Pre Construction and Construction phase:	**Waste generation:**	EXCAVATION: 2,921.07 m3 top soil +1,20,000 m3 excavated earth & MSW: 100 kg/d
	Disposal of the construction waste debris:	Excavated earth will be reused within site. Municipal Solid waste will be handed over to authorized agency
Waste generation in the operation Phase:	**Dry waste:**	36
	Wet waste:	24
	Hazardous waste:	Spent oil- 25 KL/year
	Biomedical waste (If applicable):	NA
	STP Sludge (Dry sludge):	150 kg/day
	Others if any:	E waste 100 kg/Year
Mode of Disposal of waste:	**Dry waste:**	Handed over to Authorized agency
	Wet waste:	Proposed to treat in OWC
	Hazardous waste:	Handed over to Authorized agency.
	Biomedical waste (If applicable):	NA
	STP Sludge (Dry sludge):	Used as manure.
	Others if any:	E waste handed over to Authorized agency.
Area requirement:	**Location(s):**	Next to office building. As shown on site plan
	Area for the storage of waste & other material:	20 sq.m.
	Area for machinery:	Included in above
Budgetary allocation (Capital cost and O&M cost):	**Capital cost:**	18 Lakh
	O & M cost:	0.9 lakh/annum

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			

30.Hazardous Waste Details

Serial Number	Description	Cat	UOM	Existing	Proposed	Total	Method of Disposal
1	Spent (lube) oil	5.1	KL/year	NA	25	25	Authorized agency will be appointed

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	118 Nos of DG set with capacity 2250 kVA	Diesel 470 Litres/hr/DG	3	30	0.5	475 °C

32.Details of Fuel to be used

Serial Number	Type of Fuel	Existing	Proposed	Total
1	Diesel	00	470 Litres/hr/DG	470 Litres/hr/DG
Source of Fuel		Indian oil/Bharat Petroleum		
Mode of Transportation of fuel to site		By Road		

33.Energy

Power requirement:	**Source of power supply :**	MSEDCL
	During Construction Phase: (Demand Load)	500kW
	DG set as Power back-up during construction phase	500 kVA
	During Operation phase (Connected load):	197 MW for entire project (246 MVA)
	During Operation phase (Demand load):	135 MW for entire project (169 MVA)
	Transformer:	2 Nos @ 150 MVA 220/11 KV
	DG set as Power back-up during operation phase:	118 Nos @ 2250 kVA standby application
	Fuel used:	Diesel
	Details of high tension line passing through the plot if any:	NA

34.Energy saving by non-conventional method:

1. LED Light Fixtures with Timer & photo Electric sensors to save energy for internal, external & Landscape/Façade Lighting.
2. All cables shall be FRLHS & XLPE suitably de rated to avoid heating during use.
3. Copper conductor cables to be used for sizes of 16 sq mm & below to reduce losses & improve reliability/save energy.
4. Power factor shall be maintained to 0.95 or higher to reduce Electrical losses & save energy.
5. Energy Efficient Air conditioning units (minimum 3 star rating)
6. Selection of Efficient HVAC & Plumbing Equipment's
7. Solar energy

36.Detail calculations & % of saving:

Serial Number	Energy Conservation Measures	Saving %
1	LED Light Fixtures against Florescent/CFL fixtures	30% (Approximate)
2	Power factor improvement from 0.85 to 0.95 or higher	5 % (Approximate)
3	16 sq mm copper cable Vs 25 sq mm Al cable	2 % (Approximate)

4	HVAC Energy saving Equipment's 1 star Vs 3 star	20% (Approximate)
5	Electrical starter Vs VFD	20% (Approximate)
6	Normal Fixture Vs Low Flow Fixtures in plumbing system	30% (Approximate)
7	Solar PV 35 to 40 kW	53,000 kWh (53 MWh)-Generation

37.Details of pollution control Systems

Source	Existing pollution control system	Proposed to be installed
Sewage waste water	--	Sewage treatment Plan (STP)
Solid waste	--	Organic waste converter
Noise from DG set	--	DG Set with acoustic enclosures

Budgetary allocation (Capital cost and O&M cost):	**Capital cost:**	46.5 Lakh (For solar PV & energy conservation measures)
	O & M cost:	2.2 Lakh/ annum (For solar PV & energy conservation measures)

38.Environmental Management plan Budgetary Allocation

a) Construction phase (with Break-up):

Serial Number	Attributes	Parameter	Total Cost per annum (Rs. In Lacs)
1	Air	Water for dust supression	1.44
2	Air	Air & Noise Monitoring	0.48
3	Water	Tanker Water For Construction	4.32
4	Water	Water monitoring	0.6
5	Land	Site Sanitation- Mobile toilets	16.8
6	Biological	Gardening Set Up and top soil preservation	10
7	Socio- Economic Environment	First Aid Facilities	2.4
8	Socio- Economic Environment	Health Check Up	0.8
9	Socio- Economic Environment	Creches For Children	6
10	Socio- Economic Environment	Personal Protective Equipment	4.9

b) Operation Phase (with Break-up):

Serial Number	Component	Description	Capital cost Rs. In Lacs	Operational and Maintenance cost (Rs. in Lacs/yr)
1	STP	50 KLD of 2 Nos	12	0.6
2	RWH	4 Rain water storage tanks	55	1.8
3	Solid waste management	OWC	18	0.9
4	Green Belt Development	Green Belt Development	70	2.5
5	Energy Use (Solar panel)	400 KW Solar Panels	40	2
6	Energy Saving measures	--	6.5	0.2
7	Environmental Monitoring	MoEF&CC approved laboratory	--	16.68

39.Storage of chemicals (inflamable/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
Diesel	Explosive	Front & site boundary wall	80 KL X 35 nos	80 KL X 35 nos	150 KL	Bharat Petroleum / Hindustan Petroleum	By tanker

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	Airoli Mangroves 1 km towards west from project site
	Category as per schedule of EIA Notification sheet	8a (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 to upload the copy of partnership deed.
II	PP to upload the copy of IOD.
III	PP submitted the copy of CFO NoC for phase I. PP to obtain the CFO NoC from time to time.
IV	PP to ensure ECBC norms are complied with.
V	As presented by PP, PP to ensure that the project should be zero discharge project in dry season.
VI	As presented, PP to ensure that STP should be on ground open to sky.
VII	PP to explore the possibility to increase the energy saving by solar energy upto 2%.
VIII	PP during presentation informed that there will 4oo employees in 3 shifts therefore there will not be more than 150 employees at one time and parking provided is 474 which is too high, therefore, committee asked PP to provide exact required parking & get it approved from local planning authority. PP to use those parking area as RG or to install solar panels.
IX	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.
X	PP to submit CER prescribed by MoEF&CC circular dated 1.5.2018 relevant to the area and people around the project or Environment Department may direct PP to undertake CER work in identified area, as identified by Environment Department.
XI	PP to ensure that CER plan get approved from Municipal Commissioner/District Collector.
XII	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.
XIII	SEIAA decided to grant EC for FSI:86205.104 m2, Non-FSI: 23163.869 m2 and Total BUA: 109368.983 m2 (Plan Approval no-EE/MHP-II/TTC/B-76038 of 19, Date-27.05.2019)

General Conditions:

I	E-waste shall bedisposed 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.
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 Environments (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 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.
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 breaks-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 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. SO2, 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.
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, 1stFloor, D-, Wing, Opposite Council Hall, Pune, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Shri. Anil Diggikar (Member Secretary SEIAA)

Copy to:

1. SHRI JOHNY 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

Annexure No. 02: LLP transfer of interest- Amended and Restated LLP agreement and screenshot of the same uploaded on portal

महाराष्ट्र शासन
GOVERNMENT OF MAHARASHTRA
ई-सुरक्षित बँक व कोषागार पावती
e-SECURED BANK & TREASURY RECEIPT (e-SBTR)

16270911946663

Bank/Branch: IBKL - 6910218/CHEMBUR
Pmt Txn id : 685827237
Pmt DtTime : 30-JUL-2020@10:09:48
ChallanIdNo: 69103332020073050189
District : 7101-MUMBAI

Stationery No: 16270911946663
Print DtTime : 30-JUL-2020 10:14:04
GRAS GRN : MH002783999202021S
Office Name : IGR182-BOM1_MUMBAI CITY
GRN Date : 30-Jul-2020@10:09:49

StDuty Schm: 0030045501-75/STAMP DUTY
StDuty Amt : R 15,000/- (Rs One Five, Zero Zero Zero only)

RgnFee Schm: 0030063301-70/Registration Fees
RgnFee Amt : R 0/- (Rs Zero only)

Article : 47(1)(a)--Partnership if share contri. is not immovable prop
Prop Mvblty: N.A. Consideration: R 1,12,40,00,000/-
Prop Descr : Art 47

Duty Payer: PAN-AAOFD6673N,Data Center Holdings India LLP

Other Party: FID-6672025,HDCI India Holdings LLP

Bank official1 Name & Signature

Abhimanyu Sinha
137316

Bank official2 Name & Signature
137059

--- --- Space for customer/office use - - - Please write below this line --- ---

Data Center Holdings India LLP Mumbai

e-SBTR IS VALID UPTO SIX MONTHS FROM THE DATE OF PAYMENT.

DATED JULY 31, 2020

SECOND AMENDMENT AGREEMENT OF THE AMENDED AND RESTATED LIMITED LIABILITY PARTNERSHIP AGREEMENT

OF

DATA CENTER HOLDINGS INDIA LLP

BETWEEN

HDCI INDIA HOLDINGS LLC

AND

ODGK HOLDINGS LLC

Re: Second amendment to the amended and restated limited liability partnership agreement dated July 17, 2019 executed between Eight Roads Investments, HDCI India Holdings LLC and ODGK Holdings LLC

BACKGROUND

1. Eight Roads Investments and HDCI India Holdings LLC ("**Party A**") and ODGK Holdings LLC ("**Party B**") (Party A and Party B together, the "**Parties**") executed an agreement on July 17, 2019 (the "**LLP Agreement**"), and in which Eight Roads Investments ceased to be a partner of the LLP as amended by an amendment agreement dated December 10, 2019, between Party A and Party B, with regard to Data Center Holdings India LLP (the "**LLP**"), a limited liability partnership under the Limited Liability Partnership Act, 2008.

   Each capitalized term used but not defined herein shall have the meaning assigned to it in the LLP Agreement. The rules of interpretation and construction set out in Clause 1.3 of the LLP Agreement are deemed to be incorporated, *mutatis mutandis*, in this amendment agreement ("**Second Amendment Agreement**").

2. Pursuant to discussions between the Parties, the Parties now wish to enter into this Second Amendment Agreement to record certain amendment(s) to the LLP Agreement.

AMENDMENTS

3. The parties hereby agree that with effect from the date of this Second Amendment Agreement, Part B of Section III of Schedule 3 of the LLP Agreement shall be replaced with the following:

PART – B

ADDITIONAL CONTRIBUTIONS OF PARTNERS

Pursuant to contribution of additional capital by way of cash of an amount of INR 1,124,000,000/- (Indian Rupees One Thousand One Hundred & Twenty Four Million Only) to the capital of the LLP, of which INR 1,112,760,000/- (Indian Rupees One Billion One Hundred and Twelve Million Seven Hundred and Sixty Thousand Only) is agreed to be contributed by Party A and INR 11,240,000/- (Indian Rupees Eleven Million Two Hundred and Forty Thousand Only) is agreed to be contributed by Party B , the total additional contribution to the capital of the LLP shall be INR 4,818,799,000/- (Indian Rupees Four Billion Eight Hundred and Eighteen Million Seven Hundred and Ninety Nine Thousand Only), in the following proportions as set out below:

Sr. No.	Contributor	Type of Contribution	Amount of Cash Contribution (in INR)	Contribution Percentage
1.	HDCI India Holdings LLC	Cash	4,770,611,010	99%
2.	ODGK Holdings LLC	Cash	48,187,990	1%

4. The Parties hereby agree that with effect from the date of this Second Amendment Agreement, the following shall be added as Section II of Schedule 2 of the LLP Agreement:

Schedule 2

Section II

DETAILS OF DESIGNATED PARTNERS

PART – B

NAMES OF THE DESIGNATED PARTNERS PRIOR TO THE SECOND AMENDMENT AGREEMENT DATED JULY 31, 2020

Sr. No.	Name of the Designated Partner	Nominee of Type of Contribution	DPIN
1.	Satya Prakash Ranjan*	HDCI India Holdings LLC	08635672
2.	Arshad Shikander Sayyad**	ODGK Holdings LLC	08279210

**Satya Prakash Ranjan was appointed as a Designated Partner of the LLP with effect from December 17, 2019 (as a nominee of Party A) and Balasubramanya Ramaswamy resigned as a Designated Partner of the LLP with effect from December 17, 2019 (as a nominee of Party A) and resigned as a Designated Partner of the LLP with effect from July 28, 2020 (as a nominee of Party A)*

***Arshad Shikander Sayyad was appointed as a Designated Partner of the LLP with effect from July 17, 2019 (as a nominee of Party B).*

PART – C

NAMES OF THE DESIGNATED PARTNERS IMMEDIATELY ON THE SECOND AMENDMENT AGREEMENT DATED JULY 31, 2020

Sr. No.	Name of the Designated Partner	Nominee of Type of Contribution	DPIN
1.	Sujeet Laxman Deshpande	HDCI India Holdings LLC	06617855
2.	Arshad Shikander Sayyed	ODGK Holdings LLC	08279210

GOVERNING LAW AND JURISDICTION:

5. Clause 21.1 (Governing Law) and Clause 21.2 (Dispute Resolution) of the LLP Agreement are deemed to be incorporated mutatis mutandis in this Second Amendment Agreement.

MISCELLANEOUS

6. This Second Amendment Agreement may be executed in any number of counterparts which when taken together shall constitute one agreement.

7. Save and except the modifications made by this Second Amendment Agreement, there are no other modifications made to the LLP Agreement.

(The remainder of this page has been intentionally left blank)

Data Center Holdings India LLP Mumbai

SIGNED AND DELIVERED by **HDCI India Holdings LLC** acting through its duly authorized signatory

Name: Sujeet Laxman Deshpande

Title: Designated Partner

DIN: 06617855

Data Center Holdings India LLP Mumbai

In the presence of:

Witness: _____

Name: Sai Katkar

Title: Legal Advisor

Address: 22nd Floor, Kesar Solitaire, Palm Beach Road, Sanpada, Navi Mumbai - 400 705

Occupation: Employment

In the presence of:

Witness: _____

Name: ASHISH LIMAYE

Title: PROCUREMENT MANAGER

Address: 601, KRISHNA HEIGHTS, SECTOR 8A, AIROLI NAVIMUMBAI 400708

Occupation: EMPLOYEMENT.

SIGNED AND DELIVERED by **ODGK Holdings** LLC through its duly authorized signatory

Name: Arshad Shikander Sayyad

Title: Designated Partner

DIN: 08279210

In the presence of:

Witness: B. Parasuram

Name: B. PARASURAM

Title: _____

Address: 228, 7th cross Indiranagar I stage, Bangalore - 560 038

Occupation: _____

In the presence of:

Witness: Prema Balasubramanian

Name: Prema Balasubramanian

Title: _____

Address: # 297, 10th main Indiranagar II stage Bangalore 38

Occupation: _____

5	Others	Revised Form 1A	June 5, 2019	Download
6	Others	Request letter for early consideration of project in SEAC II meeting	July 29, 2019	Download
7	Others	MoU signed under Magnetic Maharashtra by Cold Data Center services & Government of Maharashtra	July 29, 2019	Download
8	Others	R3 Form 1	September 23, 2019	Download
9	Others	R3 Form 1A	September 23, 2019	Download
10	Others	Authority letter of Ameet Nayak	September 30, 2019	Download
11	Others	IOD letter from MIDC	September 30, 2019	Download
12	Others	IOD layout from MIDC	September 30, 2019	Download
13	Compliance	Reply to 114th SEAC-2 meeting	October 22, 2019	Download
14	Compliance	Annexure 1 LLP transfer of interests - Amended and Restated LLP Agreement	October 22, 2019	Download
15	Compliance	Annexure 2 IOD	October 22, 2019	Download
16	Compliance	Annexure 3 Amendment in Parking Norms Letter to MIDC	October 22, 2019	Download
17	Compliance	Application for Thane Creek Flamingo	October 22, 2019	Download

Annexure No. 03: IOD copy and screenshot of the same uploaded on MPCB portal

MAHARASHTRA INDUSTRIAL DEVELOPMENT CORPORATION
(A Government of Maharashtra Undertaking)

No.EE/MHP-II/TTC/B-76038 /of'19
Office of the Executive Engineer,
MIDC Division No. II, Mahape
Date :- 27/05/2019

To,
M/s. Data Center Holdings India LLP
Plot No. 5&5A, Kalwa
MIDC, TTC Indl. Area,
Navi Mumbai.

Sub :- Intimation of Disapproval for submission at MOEF / SEIAA for Environment Clearance on Plot No. 5&5A, Kalwa, MIDC, TTC Indl. Area, Navi Mumbai.

Ref :- 1) Your Letter dated. 03/05/2019.
2) Your submission for Building Plan Approval vide ref. No. SWC/14/521/20190319/620610

Sir,

With reference to your letter at Sr.No.1 and online application received at Sr. No.2 for approval of building plans for proposed data center on Plot No. 5 & 5A, in T.T.C. Indl.Area, Kalwa, Navi Mumbai. In this regards it is to inform you that the proposal for approval of building plans cannot approve until and unless plans submitted for the proposed structure shall be fulfilled all the conditions mentioned in MIDC revised DCR- 2009 and NBC -2016or part thereof. Also it is requested to obtain Environment clearance and other NOC from Government department as may be applicable.

Thanking You,

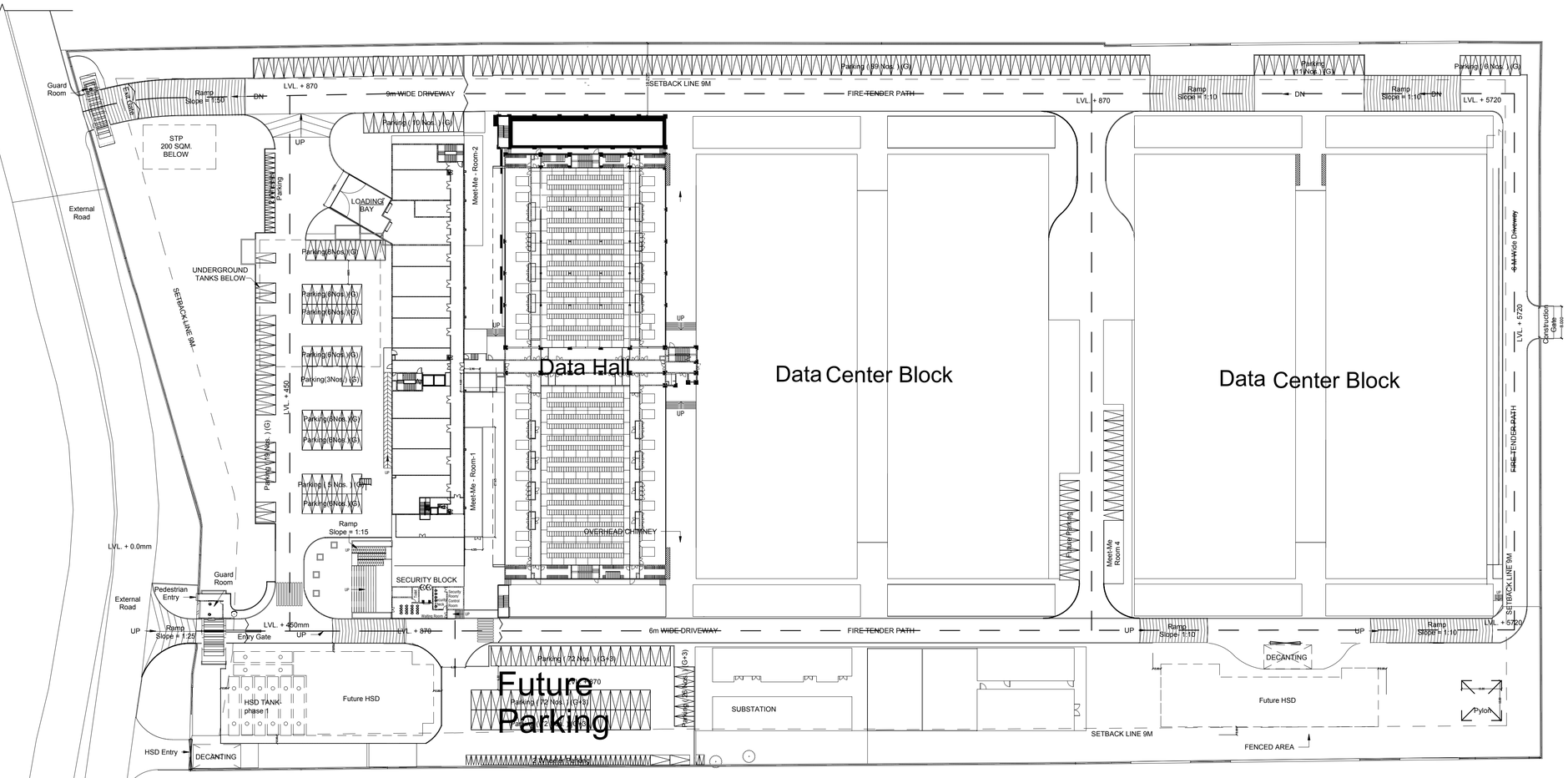
Your's faithfully

Maruti S Kalkutaki

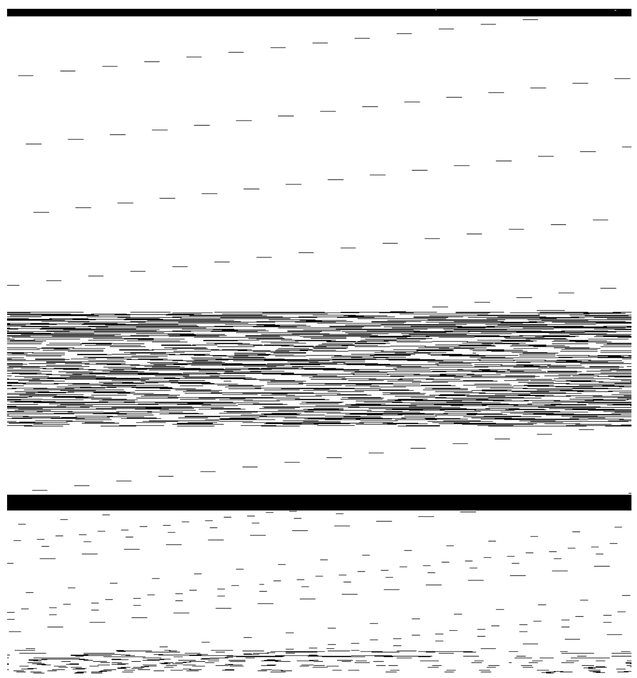
Digitally signed by Maruti S Kalkutaki
DN: c=IN, o=Government Of Maharashtra, ou=Maharashtra Industrial Development Corporation, postalCode=400710, st=Maharashtra, 2.5.4.20=0b26d65d66766c78254f655232e7bf41d358b6b50b8d394cb815f78ee5a7f536, 2.5.4.45=032100281587D47BA1475D865AF5B63889DEB4527D210A364B0128E2DA6EFE5AEAD387, serialNumber=e6228485b2c6184491b58784f78ca1de0837059ceef2d9acd3f861f6909e6a20, cn=Maruti S Kalkutaki
Date: 2019.05.27 18:30:31 +05'30'

Executive Engineer & SPA
MIDC, Division- II, Mahape

Copy to Deputy Engineer, MIDC, Sub-dn-II , Mahape for inf & n.a.
Copy to Architect, Mr. Tanay Mehta, Navi Mumbai for information .



SITE PLAN



APPROVAL STAMP OF M.I.D.C

Maruti S Kalkutaki

Digitally signed by Maruti S Kalkutaki
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Date: 2019.05.27 18:58:16 +05'30'

This drawing is not for construction purpose,only for Approval MOEF/Environment Clearance

AREA STATEMENT

1. PLOT AREA	=	62490.00 SQ.M
2. PERMISSIBLE F.S.I.	=	2.00 SQ.M
3. 10% open space + 5 % amenity	=	9373.48 SQ.M
4. Net Plot Area	=	53116.52 SQ.M
5. PERMISSIBLE BUA	=	124980.00 SQ.M
5. TOTAL PROPOSED AREA	=	86205.104 SQ.M
6. CONSUMED F.S.I.	=	1.38
8. BALANCE F.S.I.	=	0.62

1.WATER SUPPLY REQUIREMENTS

DOMESTIC USE IN LTR		FIRE FIGHTING USE	
U.G.T	O.H.T	U.G.T	O.H.T
120 CU.M.	50 CU.M.	500 CU.M.	175 CU.M.

2. TREE PLANTATION REQUIREMENTS

TREES PLANTATIONN STATEMENT

REQ NO	PROVIDED	TOTAL
625	629	629

3. PARKING STATEMENT

SR. NO.	BUA	PARKING REQUIRED		PROVIDED
1	23390.70	1 PARKING /200 SQ.MT (FOR BUILDING)	= 127 Nos.	
2		VISITORS PARKING (10% OF BUA)	= 12.7 Nos	
		TOTAL	= 139.7 Nos	= 140 Nos.
3		2WHEELER PARKING (10% OF BUA)	= 12.7 Nos	= 13 Nos

DESIGN CONSULTANT

AECOM India
Times Square, Unit No. 2, 8th Floor, Wing A,
Opp. Mittal Estate, Andheri Kurla Road, Marol,
Andheri (East), Mumbai -400059
D +91 22 67894000
Email:- www.aecom.com

DESCRIPTION OF PROPOSAL

PROPOSED INDUSTRIAL BUILDING ON PLOT NO:5 & 5A, TTC INDUSTRIAL AREA.

NAME, ADDRESS AND SIGNATURE OF OWNER

M/s.DATA CENTER HOLDINGS INDIA LLP

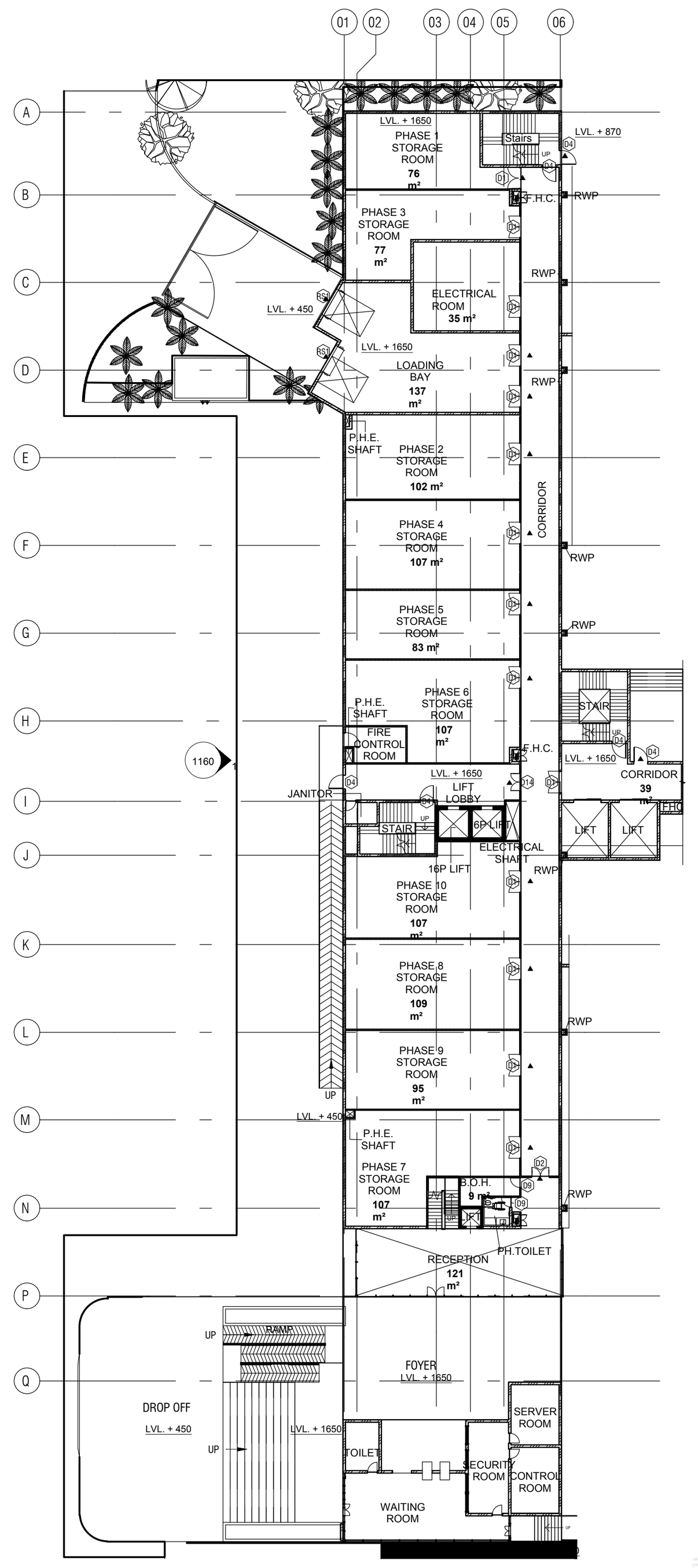
NAME, ADDRESS AND SIGNATURE OF ARCHITECT

ARCHITECT TANAY MEHTA
308/B,WELFARE CHAMBERS,
SECTOR 17,VASHI, NAVI MUMBAI.
PH. NO. -9987771063

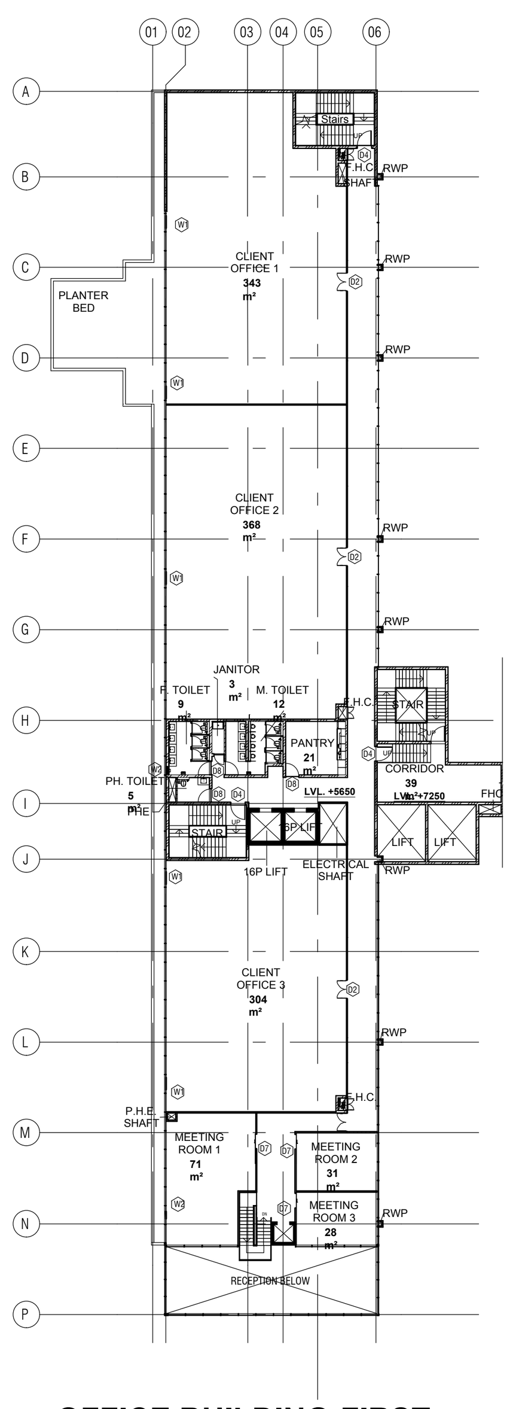
TANAY MEHTA
REG NO. CA/2014/62746

CONTENTS OF SHEETS

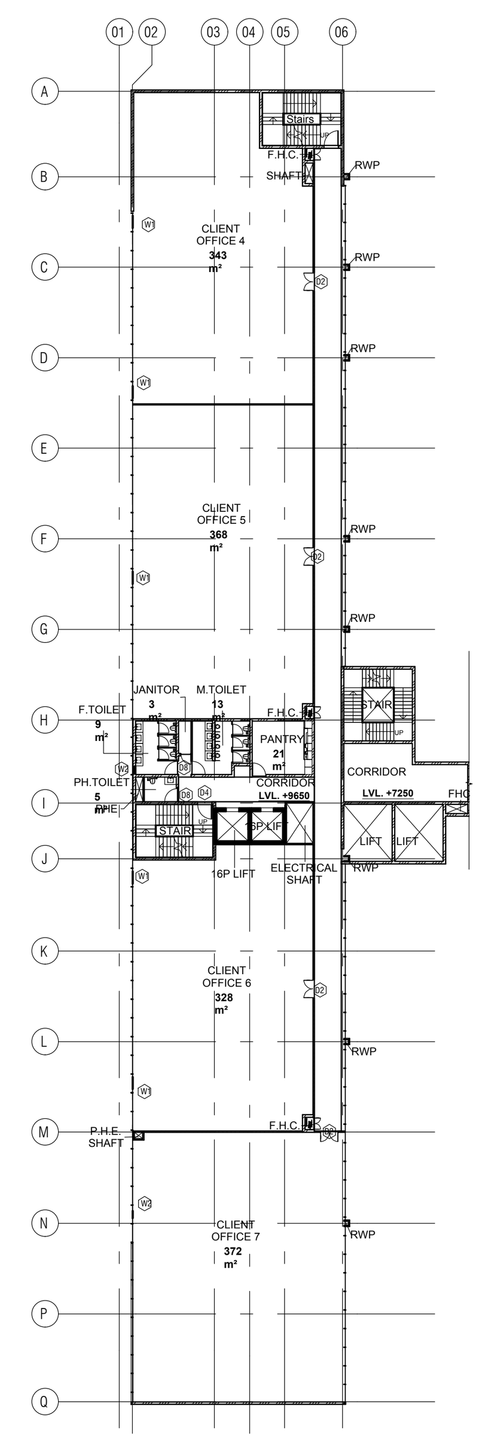
DRAWN BY	SCALE	DATE	CHKD	DRG. NO.
JSP	NTS	02.05.19	TANAY	1



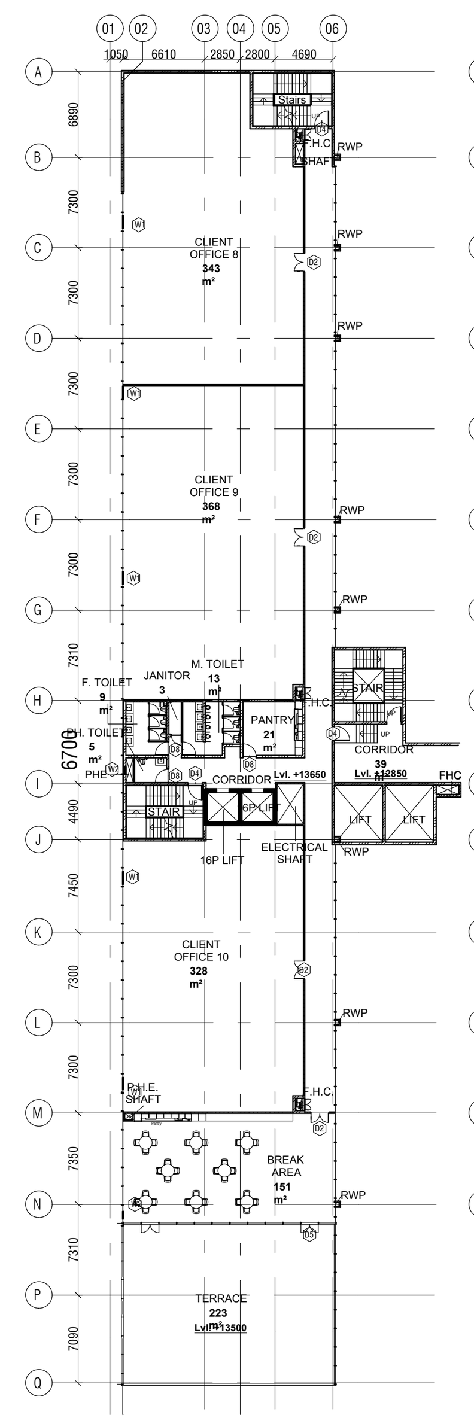
OFFICE BUILDING-GROUND FLOOR PLAN



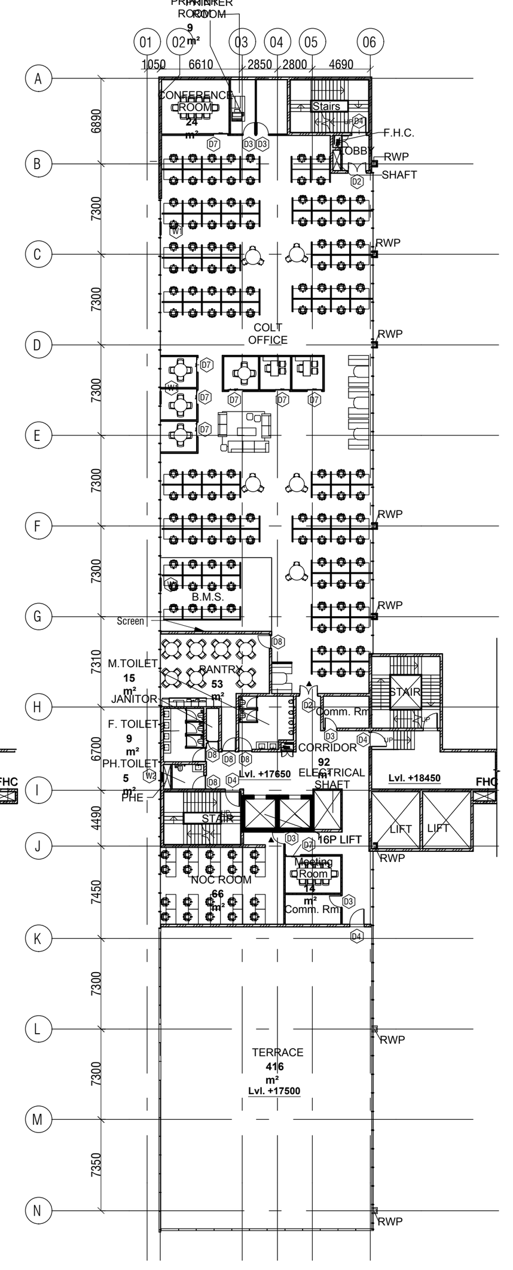
OFFICE BUILDING-FIRST FLOOR PLAN



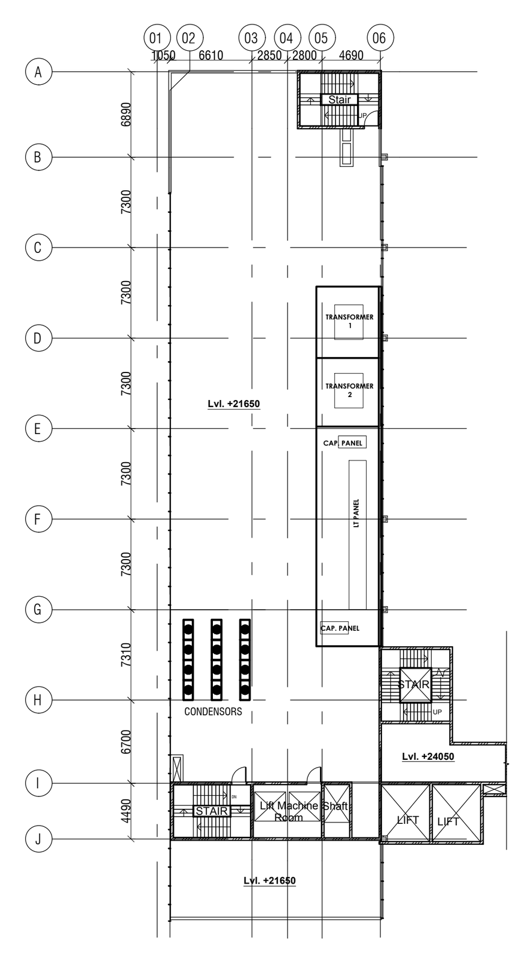
OFFICE BUILDING-SECOND FLOOR PLAN



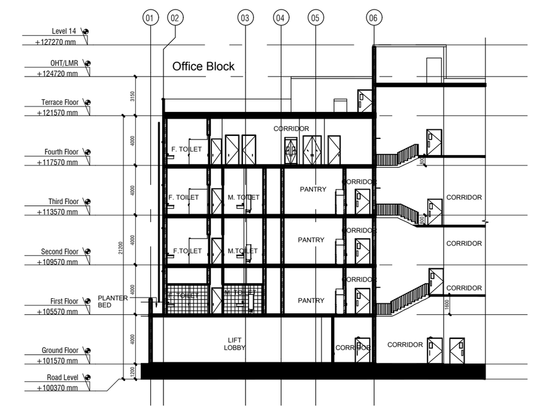
OFFICE BUILDING-THIRD FLOOR PLAN



OFFICE BUILDING-FOURTH FLOOR PLAN



OFFICE BUILDING-TERRACE FLOOR PLAN



SECTION-2

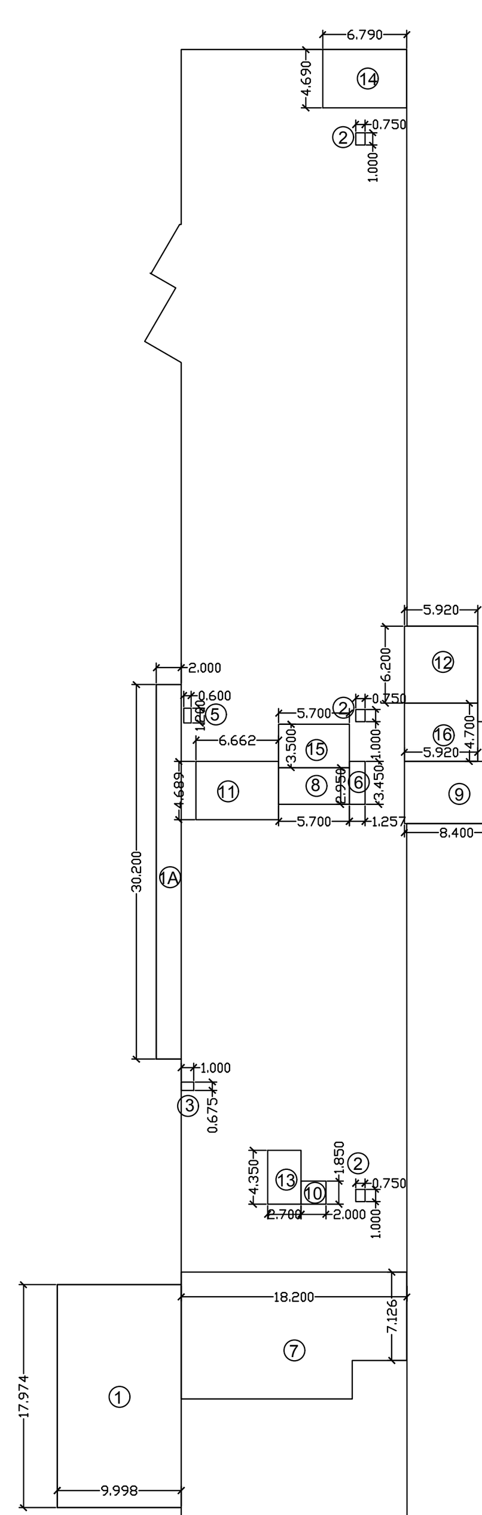
OFFICE BUILDING-AREA CALCULATION

SR.NO	BLOCK	FLOOR	AREA	TOTAL(SQ.M)
1	Office Building	Ground Floor	1900.52	7687.10
2		First Floor	1485.33	
3		Second Floor	1715.94	
		Third Floor	1499.90	
4		Fourth Floor	1085.40	
5	TOTAL			7687.10

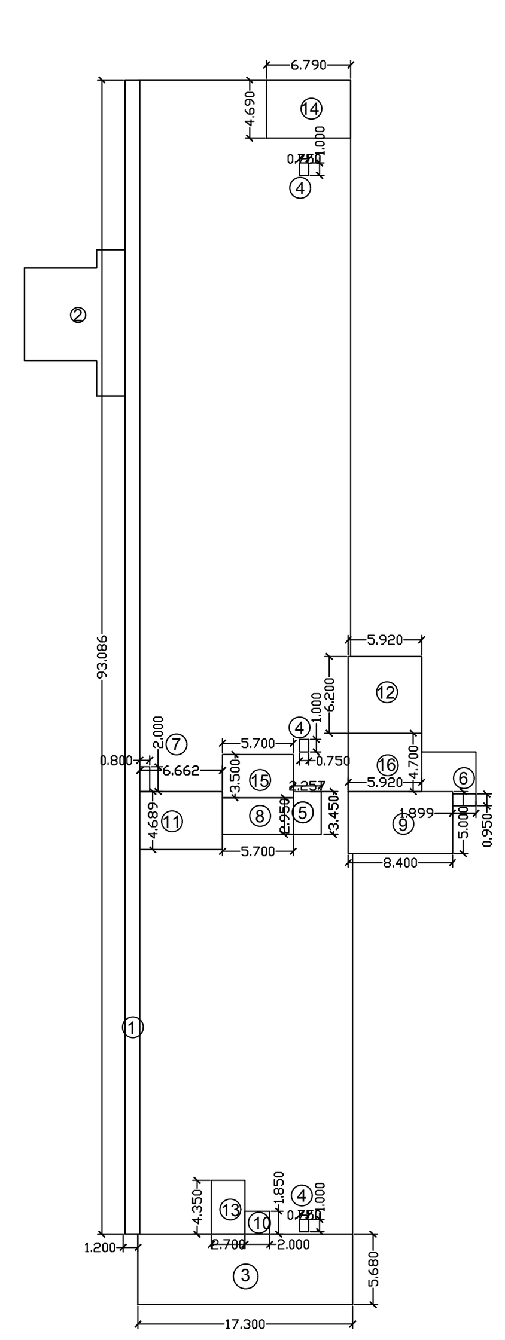
B/UP AREA CALCULATION FOR OFFICE BUILDING -GROUND FLOOR

I)	TOTAL FLOOR AREA					=	2544.837	SQ.M.
II)	STANDARD DEDUCTIONS							
1	9.998	x	17.974	x	1	=	179.704	SQ.M.
1A	2.000	x	20.200	x	1	=	40.400	SQ.M.
	TOTAL DEDUCTIONS					=	240.104	SQ.M.
III)	B/UP AREA							
	2544.837	-	240.104			=	2304.733	SQ.M.
III)	DUCTS							
2	0.750	x	1.000	x	3	=	2.250	SQ.M.
3	1.000	x	0.875	x	1	=	0.875	SQ.M.
4	1.690	x	0.500	x	1	=	1.804	SQ.M.
5	0.600	x	1.200	x	1	=	0.720	SQ.M.
6	1.257	x	3.450	x	1	=	4.337	SQ.M.
	TOTAL DUCT AREA					=	9.786	SQ.M.
IV)	B/UP AREA							
	2304.733	-	9.786			=	2294.947	SQ.M.
V)	ENTRANCE LOBBY(As per MIDC DCR Point No-18.6-I(i))							
7	16.380	x	11.374	x	1	=	171.600	SQ.M.
	TOTAL DEDUCTIONS					=	171.600	SQ.M.
VI)	B/UP AREA							
	2294.947	-	172.600			=	2122.347	SQ.M.
VII)	LIFT (As per MIDC DCR Point No-18.6-I(iv))							
8	5.700	x	2.950	x	1	=	16.815	SQ.M.
9	8.400	x	5.000	x	1	=	42.000	SQ.M.
10	2.000	x	1.850	x	1	=	3.700	SQ.M.
	TOTAL LIFT AREA					=	62.515	SQ.M.
VIII)	B/UP AREA							
	2122.347	-	62.515			=	2059.832	SQ.M.
IX)	STAIRCASE (As per MIDC DCR Point No-18.6-I(b)(vi))							
11	6.562	x	4.681	x	1	=	31.236	SQ.M.
12	5.928	x	6.200	x	1	=	36.754	SQ.M.
13	2.700	x	4.350	x	1	=	11.745	SQ.M.
14	6.730	x	4.690	x	1	=	31.845	SQ.M.
	TOTAL STAIRCASE AREA					=	111.532	SQ.M.
X)	B/UP AREA							
	2059.832	-	111.532			=	1948.300	SQ.M.
XI)	LOBBY DEDUCTIONS(As per MIDC DCR Point No-18.6-I(b)(vii))							
15	5.700	x	3.500	x	1	=	19.950	SQ.M.
16	5.928	x	4.700	x	1	=	27.824	SQ.M.
	TOTAL LOBBY AREA					=	47.774	
XII)	NET B/UP AREA							
	1948.300	-	47.774			=	1900.526	SQ.M.

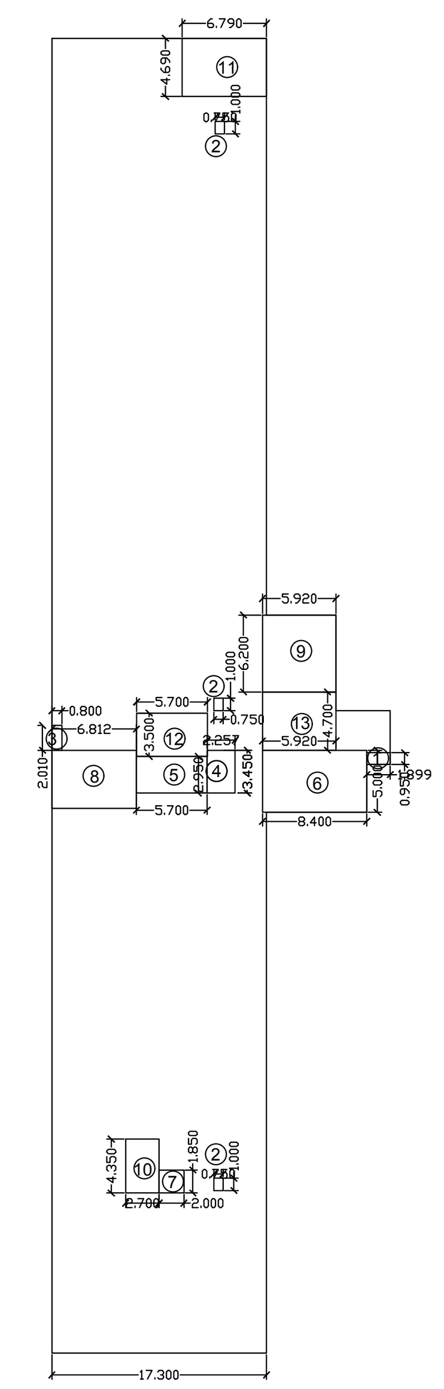
[redacted]



AREA DIAGRAM-GROUND FLOOR PLAN



AREA DIAGRAM-FIRST FLOOR PLAN



AREA DIAGRAM-SECOND FLOOR PLAN

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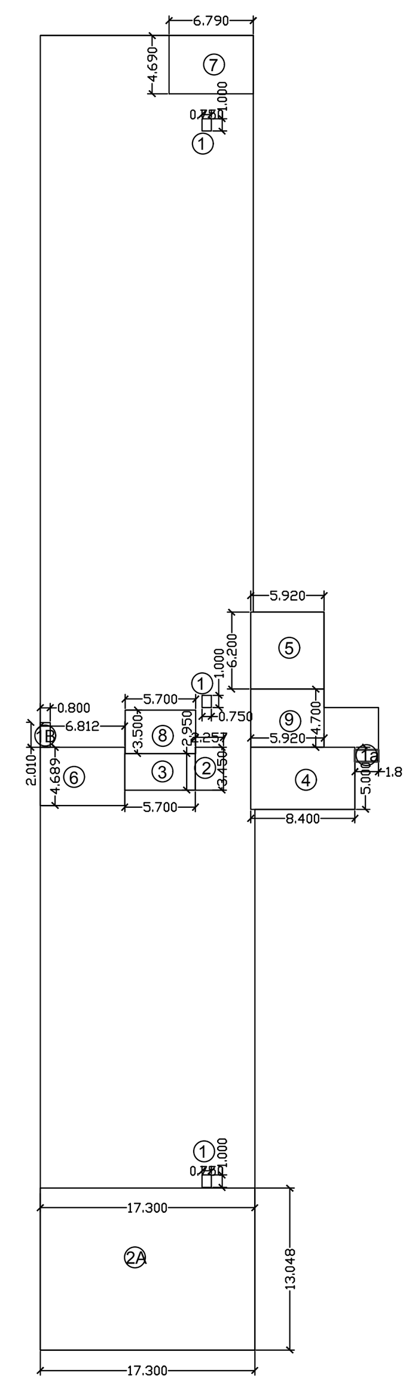
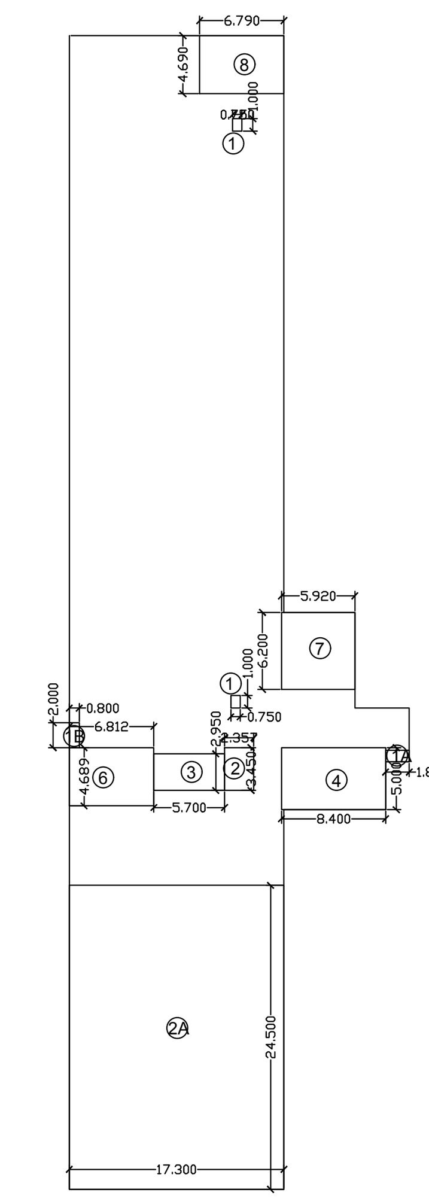
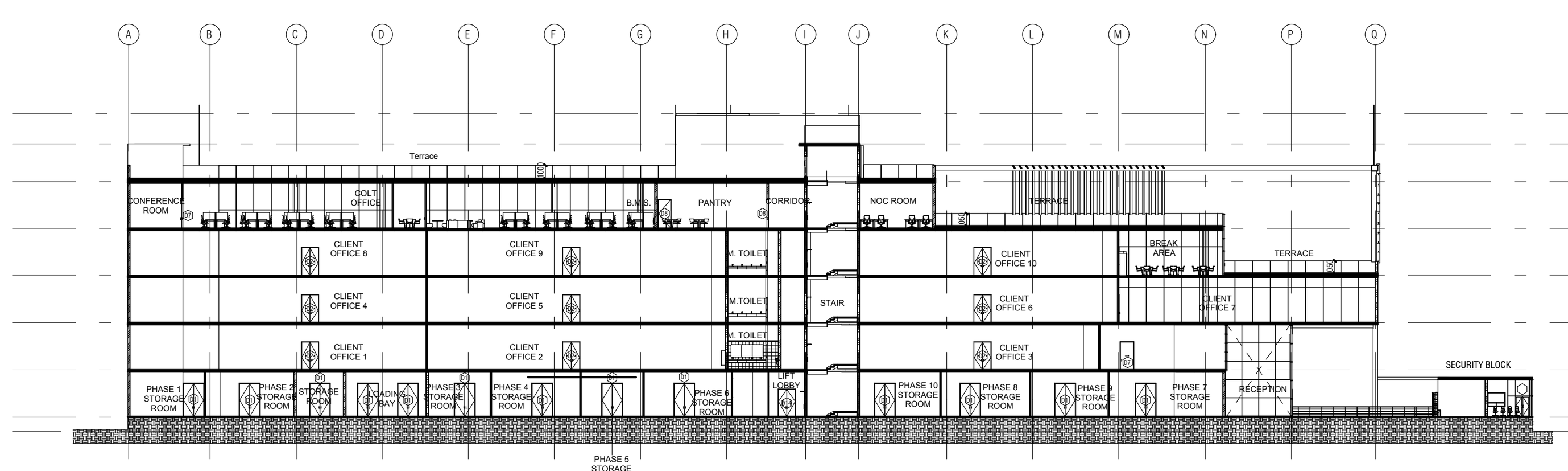


AREA DIAGRAM-THIRD FLOOR PLAN



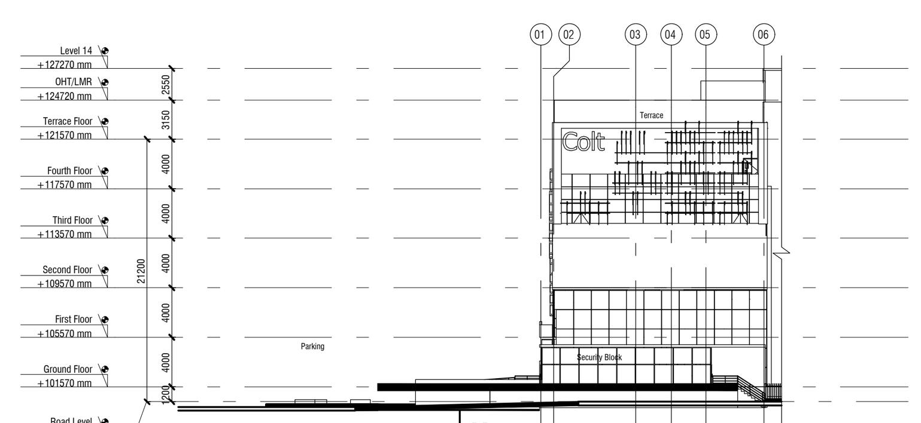
AREA DIAGRAM-FOURTH FLOOR PLAN

[redacted]



SECTION-1

ELEVATION-1



ELEVATION-2

APPROVAL STAMP OF M.I.D.C

Maruti S Kalkutaki

Digitally signed by Maruti S Kalkutaki
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This drawing is not for construction purpose,only for Approval MOEF/Environment Clearance

DESIGN CONSULTANT

AECOM

AECOM India
Times Square, Unit No. 2, 8th Floor, Wing A, Opp. Mittal Estate, Andheri Kurla Road, Marol, Andheri (East), Mumbai -400059
D +91 22 67894000
Email:- www.aecom.com

DESCRIPTION OF PROPOSAL

PROPOSED INDUSTRIAL BUILDING ON PLOT NO:5 & 5A, TTC INDUSTRIAL AREA.

NAME, ADDRESS AND SIGNATURE OF OWNER

M/s.DATA CENTER HOLDINGS INDIA LLP

NAME, ADDRESS AND SIGNATURE OF ARCHITECT

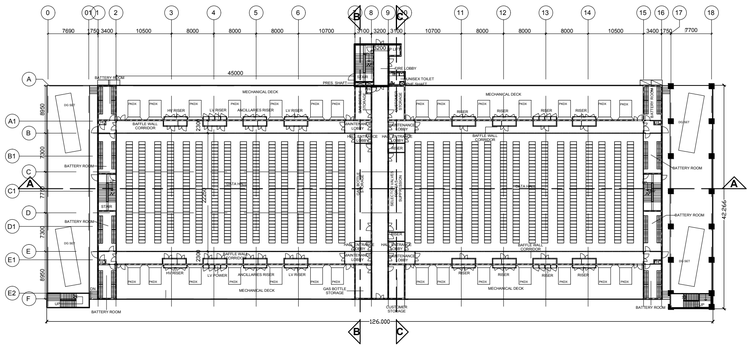
ARCHITECT TANAY MEHTA
308/B,WELFARE CHAMBERS,
SECTOR 17,VASHI, NAVI MUMBAI.
PH. NO. -9987771063

TANAY MEHTA
REG NO. CA/2014/62746

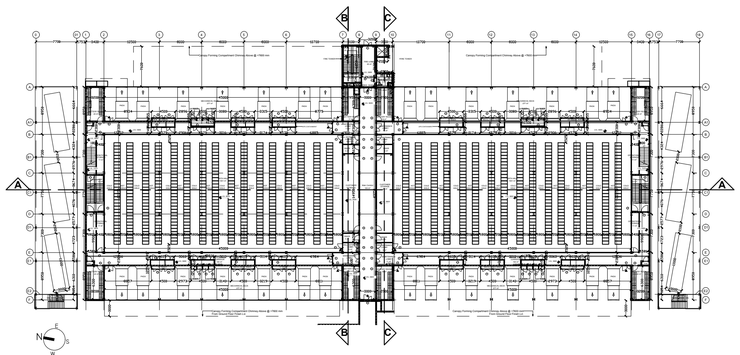
CONTENTS OF SHEETS

OFFICE BUILDING -PLANS,ELEVATION & AREA CALCULATION

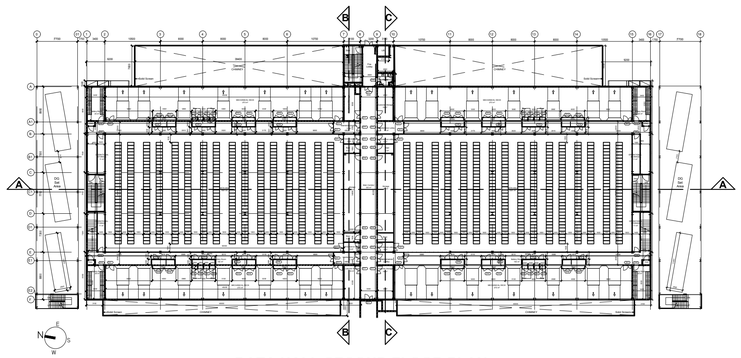
DRAWN BY	SCALE	DATE	CHKD	DRG. NO.
JSP	NTS	02.05.19	TANAY	2



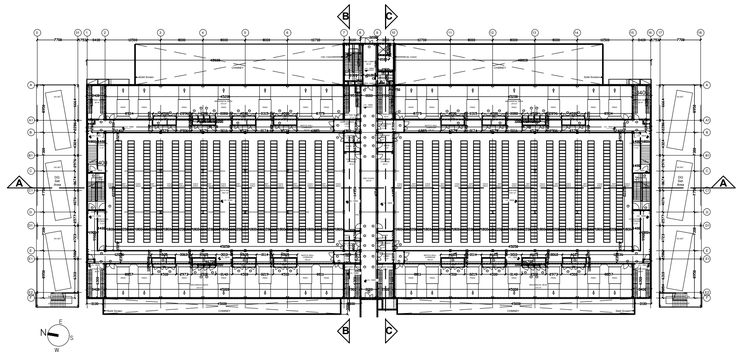
DATA HALL-PHASE-I &PHASE-II GROUND FLOOR PLAN



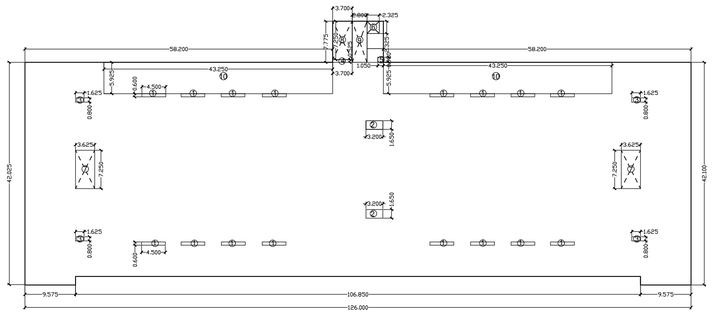
DATA HALL-FIRST FLOOR PLAN



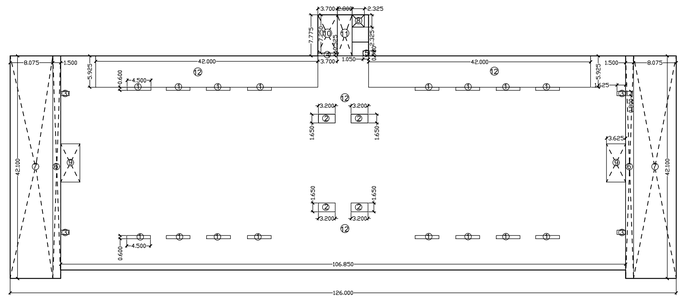
DATA HALL-SECOND FLOOR PLAN



DATA HALL-THIRD FLOOR PLAN



AREA DIAGRAM :DATA HALL-GROUND FLOOR



AREA DIAGRAM :DATA HALL-1ST,2ND AND 3RD FLOOR

P AREA (R DATA I3RD IOR		CALCULA1ALL -1S1		B/UTION FOI,2ND & FLC	
OOR ARI	SQ.M.	:A = 5208	I)	FL	3.348
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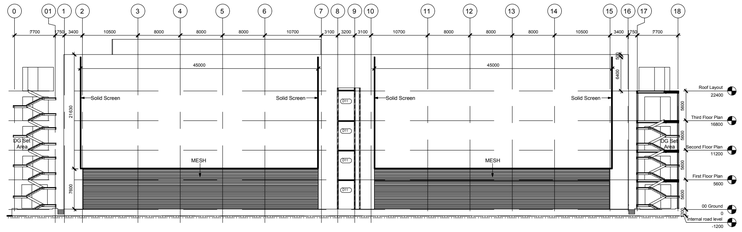

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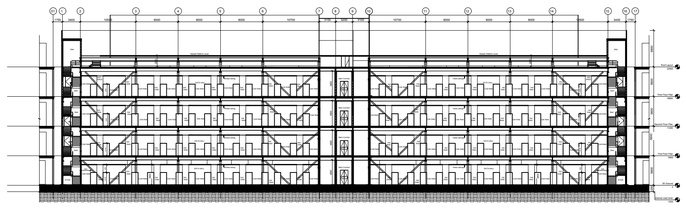

SECTION :AA

APPROVAL STAMP OF M.I.D.C

Maruti S Kalkutaki

Digitally signed by Maruti S Kalkutaki
DN: c=IN, o=Government Of Maharashtra, ou=Maharashtra Industrial Development Corporation, postalCode=400710, st=Maharashtra, 2.5.4.20=0b26d65d66766c78254f655232e7bf41d358b6b50b8d394cb815f78ee5a7f536, 2.5.4.45=032100281587D47BA1475D865AF5B63889DEB4527D210A364B0128E2DA6EFE5AEAD387, serialNumber=e6228485b2c6184491b58784f78ca1de0837059ceef2d9acd3f861f6909e6a20, cn=Maruti S Kalkutaki
Date: 2019.05.27 18:59:00 +05'30'

This drawing is not for construction purpose,only for Approval MOEF/Environment Clearance

DESIGN CONSULTANT

AECOM India
Times Square, Unit No. 2, 8th Floor, Wing A,
Opp. Mittal Estate, Andheri Kurla Road, Marol,
Andheri (East), Mumbai -400059
D +91 22 67894000
Email:- www.aecom.com

DESCRIPTION OF PROPOSAL

PROPOSED INDUSTRIAL BUILDING ON PLOT NO:5 & 5A, TTC INDUSTRIAL AREA.

NAME, ADDRESS AND SIGNATURE OF OWNER

M/s.DATA CENTER HOLDINGS INDIA LLP

NAME, ADDRESS AND SIGNATURE OF ARCHITECT

ARCHITECT TANAY MEHTA
308/B,WELFARE CHAMBERS,
SECTOR 17,VASHI, NAVI MUMBAI.
PH. NO. -9987771063

TANAY MEHTA
REG NO. CA/2014/62746

CONTENTS OF SHEETS

DATA HALL-PLANS,ELEVATION & AREA CALCULATION

DRAWN BY	SCALE	DATE	CHKD	DRG. NO.
JSP	NTS	02.05.19	TANAY	3

5	Others	Revised Form 1A	June 5, 2019	Download
6	Others	Request letter for early consideration of project in SEAC II meeting	July 29, 2019	Download
7	Others	MoU signed under Magnetic Maharashtra by Cold Data Center services & Government of Maharashtra	July 29, 2019	Download
8	Others	R3 Form 1	September 23, 2019	Download
9	Others	R3 Form 1A	September 23, 2019	Download
10	Others	Authority letter of Ameet Nayak	September 30, 2019	Download
11	Others	IOD letter from MIDC	September 30, 2019	Download
12	Others	IOD layout from MIDC	September 30, 2019	Download
13	Compliance	Reply to 114th SEAC-2 meeting	October 22, 2019	Download
14	Compliance	Annexure 1 LLP transfer of interests - Amended and Restated LLP Agreement	October 22, 2019	Download
15	Compliance	Annexure 2 IOD	October 22, 2019	Download
16	Compliance	Annexure 3 Amendment in Parking Norms Letter to MIDC	October 22, 2019	Download
17	Compliance	Application for Thane Creek Flamingo	October 22, 2019	Download

Annexure No. 04: Provisional CFO NoC copy

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/D-06038
Date: 16/09/2019

M/s. Data Center Holdings India LLP.
Plot No. 5-5A,
MIDC, TTC Indl. Area.

Sub: Grant of "Provisional No Objection Certificate" for proposed construction of Data Centre on Plot No. 5-5AMIDC, TTC Indl, Area.

Ref: Your application vide no; SWC/14/521/20190319/620610.

Dear Sir,

This has reference to the above this office has **"No Objection (Provisional)"** for your proposed construction on plot no. 5-5A, 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 **62,490.00 Sq mtr.** The proposed built up area is **23,695.14 Sq. Mtr.** The height of the proposed structure is **21.221 mtr.** The area wise details of each floor are as under:-

Floor Name	Proposed FSI Area Ind.	Terrace	Stair	Lift	Lift Lobby
Fourth Floor	1109.51	408.57	100.23	36.41	19.07
Third Floor	5128.49	215.54	193.56	41.17	63.80
Second Floor	5327.20	0.00	183.27	41.17	32.78
First Floor	5131.31	0.00	188.62	44.40	32.78
Ground Floor	6998.63	0.00	184.51	44.40	36.38
Grand Total :	**23,695.14**	**624.11**	**850.19**	**207.57**	**184.81**

- **The occupant load in above buildings should not exceed in any case as prescribed in Table – 3 of National Building Code 2016, part IV.**

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

1. **The plans of the proposed construction (adhering to the D.C. Rules of MIDC & National Building Code-2016 where necessary), should be approved by the Deputy Engineer, Division Mahape, (Special Planning Authority).**
2. **The Drainage completion certificate & Occupation certificate should be obtained from Deputy Engineer Division Mahape. 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 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 firefighting.**
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-lees 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 IS 12456: Code of Practice for FIRE PROTECTION OF ELECTRONIC DATA PROCESSING INSTALLATION shall be followed.**
38. **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 2016:-

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.**

REQUIREMENT AND PROVISION:- The following Fire Protection System is required for the fire safety of the Proposed building:-

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.	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.

Sr. No.	FIRE FIGHTING INSTALLATION	Requirements	Provision	Remarks
6.	Underground Static Storage Tank	**Required** 3,00,000 liters		This water storage should be exclusively for Fire Fighting.
7.	Terrace Level Tank	**Required** 10,000 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		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
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.	Gas Flooding System	Required	Shall be provided Data Centre and Server Rooms	
15.	PA System with Talk Back Facility	Required	To guide the occupants in case of emergency.	
16.	Auto D.G. Backup	Required	Required for all fire safety systems.	
17.	Pressurization	Required	In all staircase, Lobbies & Lift shaft in entire Bldg.	
18.	Sign Indicators for all fire safety, safe evacuation of occupants in case of emergency signs	Required at Prominent Places.	Sign indicators should provide 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.**	
19.	Fire Brigade Connection- For Static Water Tank and For Hydrant System		Required at the Main Gate and on fire water tank	

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 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.

b) Staircase and corridor lighting shall also be connected to alternate source of supply.

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) Passageway should be provided as per the guidelines given in National Building Code- 2016.

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 angel greater than 45 ^{0} 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 m^2 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 m^2. 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 pain 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.

<u>Staircase and Corridor Lightings:</u>

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.

Compartmentation :-

General –

a) It is important to limit the spread of fire in any building. The usual method is to use fire barriers. In some instances these barriers need to be penetrated for ductwork, plumbing and electrical systems, and in such cases, use of passive fire protection measures shall be done so that the integrity of these barriers is not compromised.

b) Floor(s) shall be compartmented with area as given below.

All floors shall be compartmented/ zoned with area of each compartment being not more than 750 m^2. The maximum size of the compartment shall be as follows, in case of sprinklered basement/building:

Sr. No.	Use	Compartmentation Area m^2
(1)	(2)	(3)
i)	Basement car parking	3000
ii)	Basement (other than car parking)	2000
iii)	Institutional Buildings: Subdivision C-1	1800
iv)	Institutional Buildings: Subdivision C-2 and C-3	1125
v)	Mercantile and assembly buildings	2000
vi)	Business buildings	3000
vii)	All other buildings (Excluding low hazard and moderate hazard industrial buildings and storage buildings) [1)]	750
[1)] Compartmentation for low hazard and moderate hazard industrial buildings and storage buildings shall be done in consultation with local fire department.		

In addition, there shall be requirement of a minimum of two compartments if the floor plate size is equal or less than the areas mentioned above. However, such requirement of minimum two compartments shall not be required, if the floor plate is less than 750 m^2. Compartmentation shall be achieved by means of fire barrier having fire resistance rating of 120 min.

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 rout
   - 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 luminairies 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 confirm 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 sand by 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	Pressurized	Pressurized

		buildings (A-2 and A-4)		
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 :

1. The natural ventilation requirement of the staircase shall be, achieved through opening at each landing, of an area 0.5 m^2 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.
2. 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:
   1) Directly connected to the stairway by ductwork enclosed in non-combustible construction.
   2) 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, 250^0C for 120 min. For naturally cross-ventilated corridors or corridors with operable windows, such smoke exhaust system or pressurization system will not be required.

THE H.S.D & F.O. STORAGE TANK AREA:

1. The design, construction & installation of "**A" class "B" Class & "C" class** petroleum storage tank should be as per the specification laid down by **Chief Controller of Explosives. Approval from C.C.E.must be obtained.**
2. Sufficient Distance from all the sides of tank should be kept and barbed wire fencing should be provided of minimum 1.5 Mtr. Height.
3. Caution boards **"DANGER"** and **"NO SMOKING"** should be displayed on the gate of the fence yard.
4. Vent pipe of the storage tank should be provided as per the specification laid down in relevant standard.
5. The surface of the tank farm area should be made up surface & no grass or shrubs shall be allowed to grow within the tank farm area.
6. Two water monitors & two hydrant points shall be installed around the tank farm area diagonally opposite to each other. The jet of the monitors should reach the top most part of the highest tank in tank farm area. The peripherial ring with sprinklers shall be provided to each tank intank farm area.
7. The lightening arrestor shall be installed on the highest part of the tank farm area.
8. All electrical fittings, fixtures in **"A", "B", "C" class** petroleum storage, loading/unloading pumps must be strictly flame proof & must be confirming to relevant IS specifications.
9. The tankers entering in to **"A", "B", "C"** class loading/unloading shall be provided with spark arrester on the silencer and proper earthening facility shall be provided to the tanker while loading/unloading. The water spray system shall be provided to loading / unloading platform.
10. Proper earthening shall be provided to storage tanks, pipelines, loading/unloading gadgets to dissipate the static current generated during the transportation of hydrocarbons.
11. The Storage tank should be as per the specification laid down by C.C.E. & approval of Chief Controller of Explosives must be obtained.
12. **The barbed wired fencing of 1.5 M height should be provided to Solvent Storage Yard.** The gate shall be painted in **"RED"** colour & it shall be kept always in locked position to avoid the entry of unauthorised person. The key of the storage yard shall be kept with responsible person of the Company.
13. Caution boards like **"Danger", "No smoking"** shall be displayed on the gate of fence yard.

14. The marginal space around the tank farm should be kept free from any obstructions as per the drawing approved by Chief Controller of Explosives.
15. The surface of the tank farm area should be made up surface & no grass or shrubs shall be allowed to grow within the tank farm area.
16. The proper Earthening facility shall be provided to the tanks installed in tank farm area as well as the truck while loading/unloading the F.O. The spark arrestor shall be provided to the silencer of the truck before entering the premises.

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;

d) The inspection panel doors and any other opening in the shaft shall be provided with air-tight fire doors having fire resistance of not less than 2 h;

e) Medium and low voltage wiring running in shafts, and within false ceiling shall run in metal conduit. Any 230 V wiring for lighting or other services, above false ceiling, shall have 660 V grade insulation. The false ceiling, including all fixtures used for its suspension, shall be of non-combustible material and shall provide adequate fire resistance to the ceiling in order to prevent spread of fire across ceiling reference may be made to good practice.

f) An independent and well ventilated service room shall be provided on the ground level or first basement with direct access from outside or from the corridor for the purpose of termination of electric supply from the licensees' service and alternative supply cables. The doors provided for the service room shall have fire resistance of not less than 2 h;

g) If the licensees agree to provide meters on upper floors, the licensees' cables shall be segregated from consumers' cables by providing a partition in the duct. Meter rooms on upper floors shall not open into stair case enclosures and shall be ventilated directly to open air outside; and

h) Suitable circuit breakers shall be provided at the appropriate points.

Guidelines for Substation/Transformers

- Areas in substation shall not be used as storage/dump areas or for other utility purposes other than those required for the functioning of the substation.
- The substation area should be adequately ventilated.
- An independent, ventilated or air conditioned MV panelroom shall be provided on the ground level or first basement. This room shall be provided with access from outside (or through exit passageway accessible from outside). The MV panel room shall be provided with fire resistant walls and doors of fire resistance of not less than 120 min.
- If the licensees agree to provide meters on upper floors, the licensee's cables shall be segregated from consumer's cables by providing a partition in the shaft.
- Meter rooms on upper floors shall not open into staircase enclosures and should be ventilated directly to open air outside or in electrical room of 120 min fire resistant walls.
- Electrical MV main distribution panel and lift panels shall be provided with CO2/inert gas flooding system for all panel compartments with a cylinder located beside the panel.

Oil filled substation

- A substation or a switch-station with oil filled equipment shall be limited to be installed in utility building or in outdoor location. Such substation/utility building shall be at least 7 m away from the adjoining building(s).
- Substation equipment (exceeding oil capacity of 2000 litre) in utility building shall have fire rated baffle walls of 240 min rating constructed between such equipment, raised to at least 600 mm above the height of the equipment (including height of oil conservators) and exceeding 300 mm on each side of the equipment.
- All transformers where capacity exceeds 10 MVA shall be protected by high velocity water spray systems or nitrogen injection system.

Dry type substation

- Transformers located inside a building shall be of dry type and all substation/switch room walls, ceiling, floor, opening including doors shall have a fire resistance rating of 120 min.
- Access to the substation shall be provided from the nearest fire exit/exit staircase for the purpose of electrical isolation.

In addition to the above, all provision under the D.C. Rules of MIDC and N.B.C. shall be strictly adhered, also if any change in activity or Proposed expansion or Subletting of Plot or Transfer of Plot, NOC from this department is essential.

Note; This Provisional No Objection Certificate is granted for FSI – 1.0 Only. In future if you intend to go for extension of your building after obtaining permission for Additional FSI. You are hereby informed to provide clear marginal spaces around the building considering additional FSI & proportionate height of the proposed building. (As per D. C. Rule Table No, 10) Due to any constraint, if the marginal spaces are not maintained as per table 2 (Clause No; 8.2.3.1) of N.B.C part III & as per D C Rule Table No, 10 , it will be obligatory on your part to consume the FSI without affecting the marginal spaces as prescribed in the rules or the National Building Code thereof.

This is a **Provisional No Objection Certificate.** After providing the above fire prevention and protection system and after compliance of above recommendations inspection of the premises & fire prevention & protection arrangements will be carried 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. Data Center Holdings India LLP., vide receipt no. GL20011190 Dt. 05-04-2019**	**Balance "Fire Protection Fund fees" needs to be recovered by SPA**
(i)	**(ii)**	**(iii)**	**(iv)**
Initial "Fire Protection Fund fees"	**Rs. 1,85,263.12**	**Rs. 1,57,036.00**	**Rs. 28,227.12**
Additional "Fire Protection Fund fees"	**Rs. 23,44,623.55**	**Rs. 00.00**	**Rs. 23,44,623.55**
Total	**Rs. 25,29,886.67**	**Rs. 1,57,036.00**	**Rs. 23,72,850.67**

The undersigned reserves right to amend any additional recommendations deemed fit during the final 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
Date: 2019.09.16 15:55:43 +05'30'

(S.S. Warick)
Chief Fire Officer & Fire advisor
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.

Annexure No. 05: ECBC Compliance parameters

Sr. No.	Point Description	Minimum Required (As per ECBC 2007)	Actually Provided
1	Total terrace area available in the project	-	47958 Sq. m. (10 Phase Data Centre blocks, Terrace,4th, 3rd floor
2	Total usable terrace area for solar panels & Solar hot water (Confirmed through Shadow Analysis)	-	1274 Sq. m. (2.65 % of terrace area)
3	Actual area proposed to be utilized for generating solar energy / Hot Water	-	1184 Sq. m. (Removing offset area & adding MLCP area)
4	Connected Load	As per design	197 MW
5	Demand Load	As per design	135 MW
6	1% demand load / energy proposed to be generated through renewable sources as a percentage of demand load.	135,000,000 kWh/year	233,643 kW kWh/year

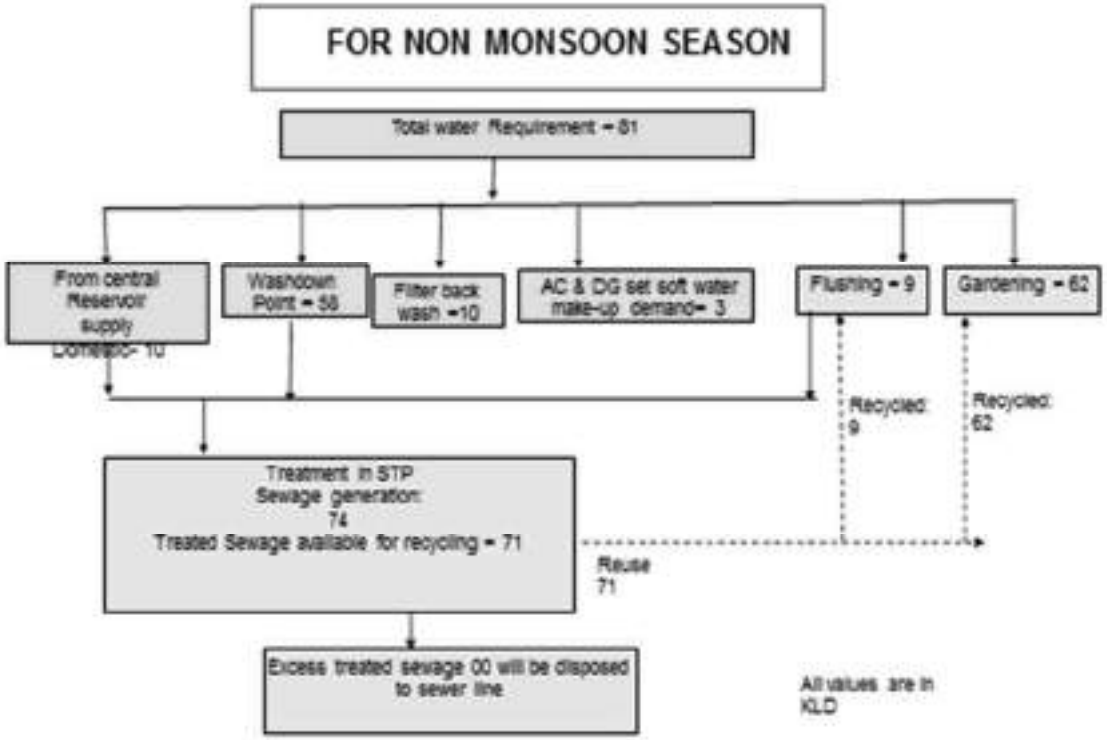
7	20% water heating / water heating capacity provided as percentage of total water heating requirement	As per design	No Solar Hot Water Requirement
8	Actual solar energy generated through renewable sources including solar water heaters.	-	233,643 kWh/year (Total Capacity of PV: 185 kWp)
9	Cost for renewable energy including water heating	-	Rs. 12,025,000/- (Cost: Rs. 65,000/kWp)
10	Essential power load for firefighting Lifts etc. required during emergency	As per design	225 kW
11	Actual DG backup provided which should equal to or more than 10% of maximum demand or equal to all emergency requirements like Fire Fighting Pumps, Fire Lifts, Emergency Lighting, Water Pumps, STP, Solid Waste Treatment Plant, Water Treatment Plant Etc. whichever is	As per design	240,000 KVA (120 no. x 2000 KVA)

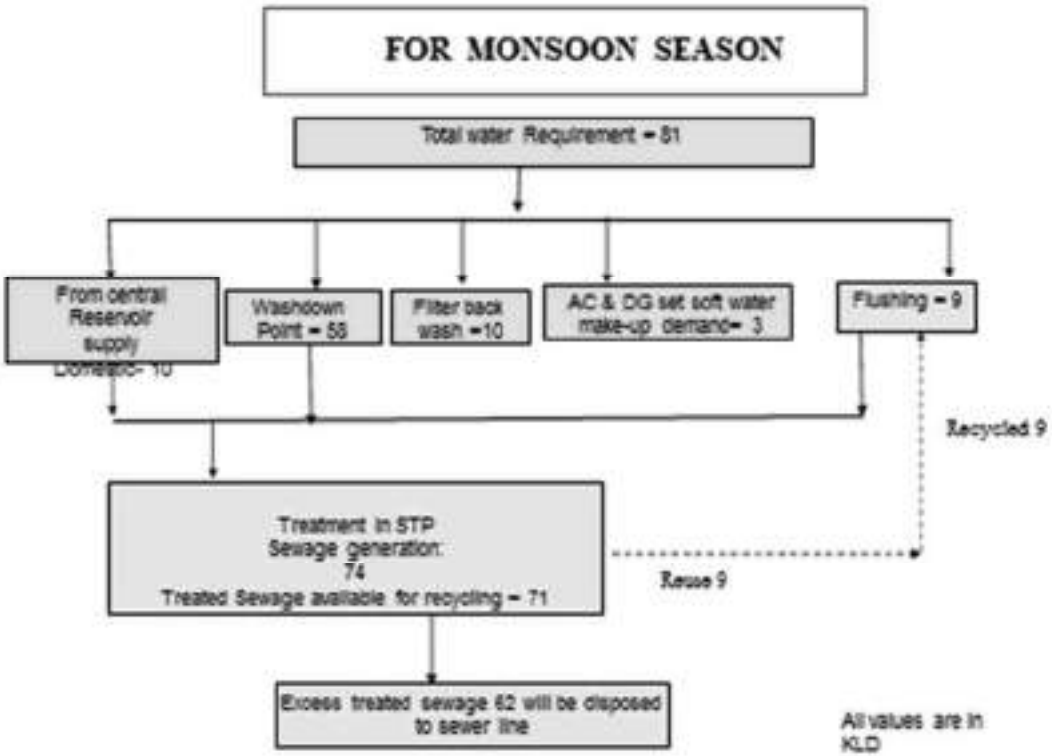
	higher.		
12	Special Mitigating factors provided in the project for the efficient use of project		
	a) Latest transformer	Oil Type transformer As per BIS II	Oil Type transformer As per BIS II
	b) Fuel efficient automated DG set	CPCB Approved 3 star Rated	CPCB Approved 3 star Rated
	c) If power quality is poor then the special provision like capacitor bank etc. provided	-	-
	d) LED	Yes	Yes
	e) Solar PV	1% of Demand Load	185 kWp
	f) Solar Hot Water	-	No solar hot water requirement

	g) Lighting Dimmer	-	Yes
	h) Lighting Timers	-	Yes
	i) Energy Efficient Lift	-	Yes
	j) Star Rated Pumps & Motors	-	Yes
	k) Occupancy/ Lighting Sensors	-	Yes
	l) 5 Star Rated Heat Pumps	-	Not applicable
13	Total Power saving including saving due to solar Water PV & Heaters.	150,974 MWh	146,694 MWh
14	Exterior Wall Construction (U factor)	0.40 W/sm.K	0.8 W/smK
15	Roof Construction (U factor)	0.33 W/sm.K	0.33 W/smK
16	Glazing	U factor: 3.0 W/sm.K	U factor: 1.6 W/smK
		SHGC:0.27	SHGC:0.23
		VLT: NA	VLT: 41
17	WWR	<40%	36%
18	Shading Devices	N.A.	As per design

19	Lighting Power Density	Office: 10 W/sq.m. Restrooms: 7.7 W/sq.m	Office: 10 W/sq.m. Restrooms: 7.7 W/sq.m
20	EPI Ratio (EPI Ratio can be calculated through energy modeling considering Wall, Roof, Glass U value, Lighting Design & HVAC design in any.)	-	EPI RATIO: 0.97 (Whole Building Performance Method)

Annexure No. 06: Water Balance Chart



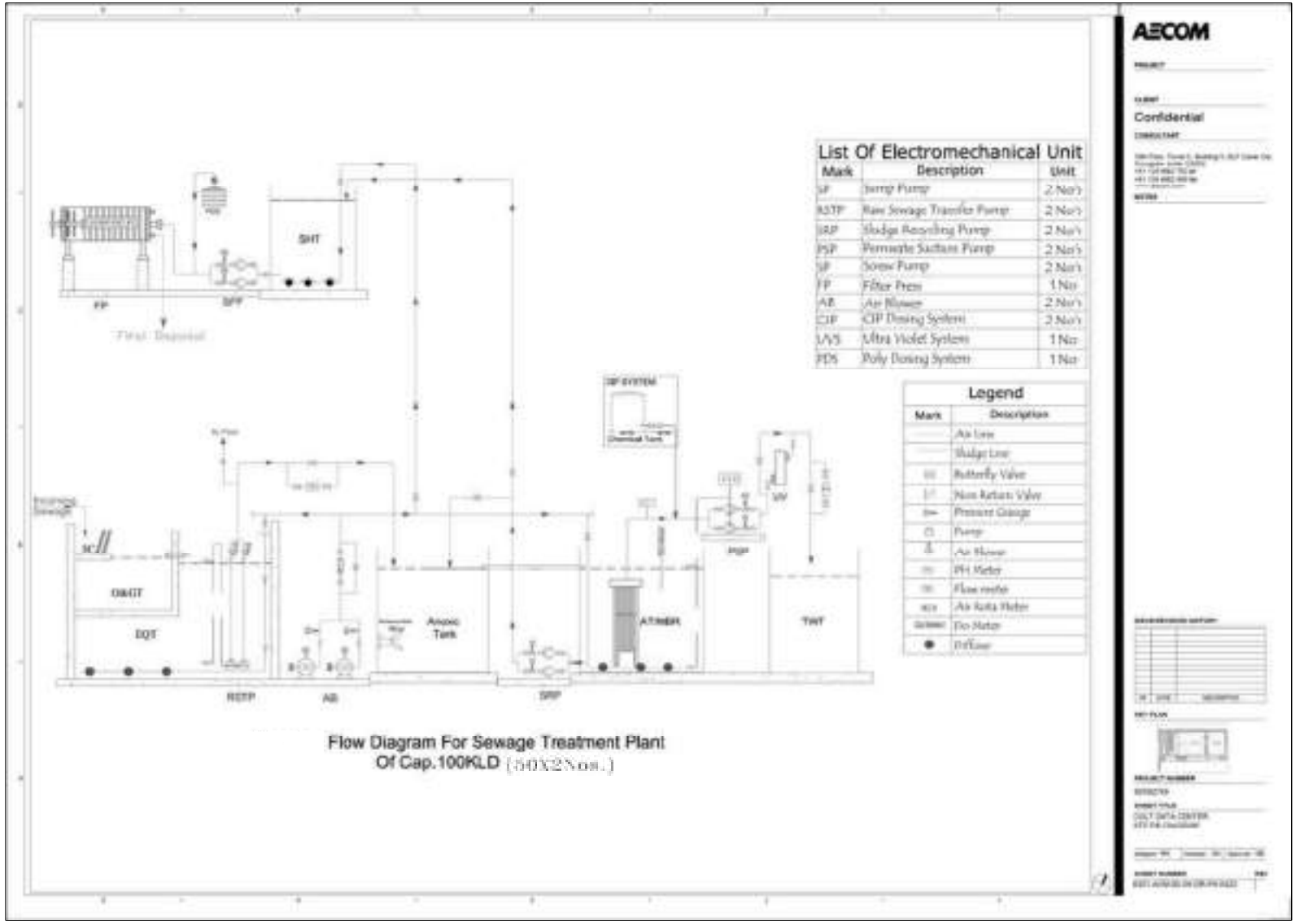

FOR MONSOON SEASON
Total water Requirement = 81
From central Reservoir supply
Washdown Point = 55
Filter back wash =10
AC & DG set soft water make-up demand= 3
Flushing = 9
Recycled 9
Treatment in STP
Sewage generation: 74
Treated Sewage available for recycling = 71
Reuse 9
Excess treated sewage 62 will be disposed to sewer line
All values are in KLD

Annexure No. 07: Sewage Treatment Plant location and section plan

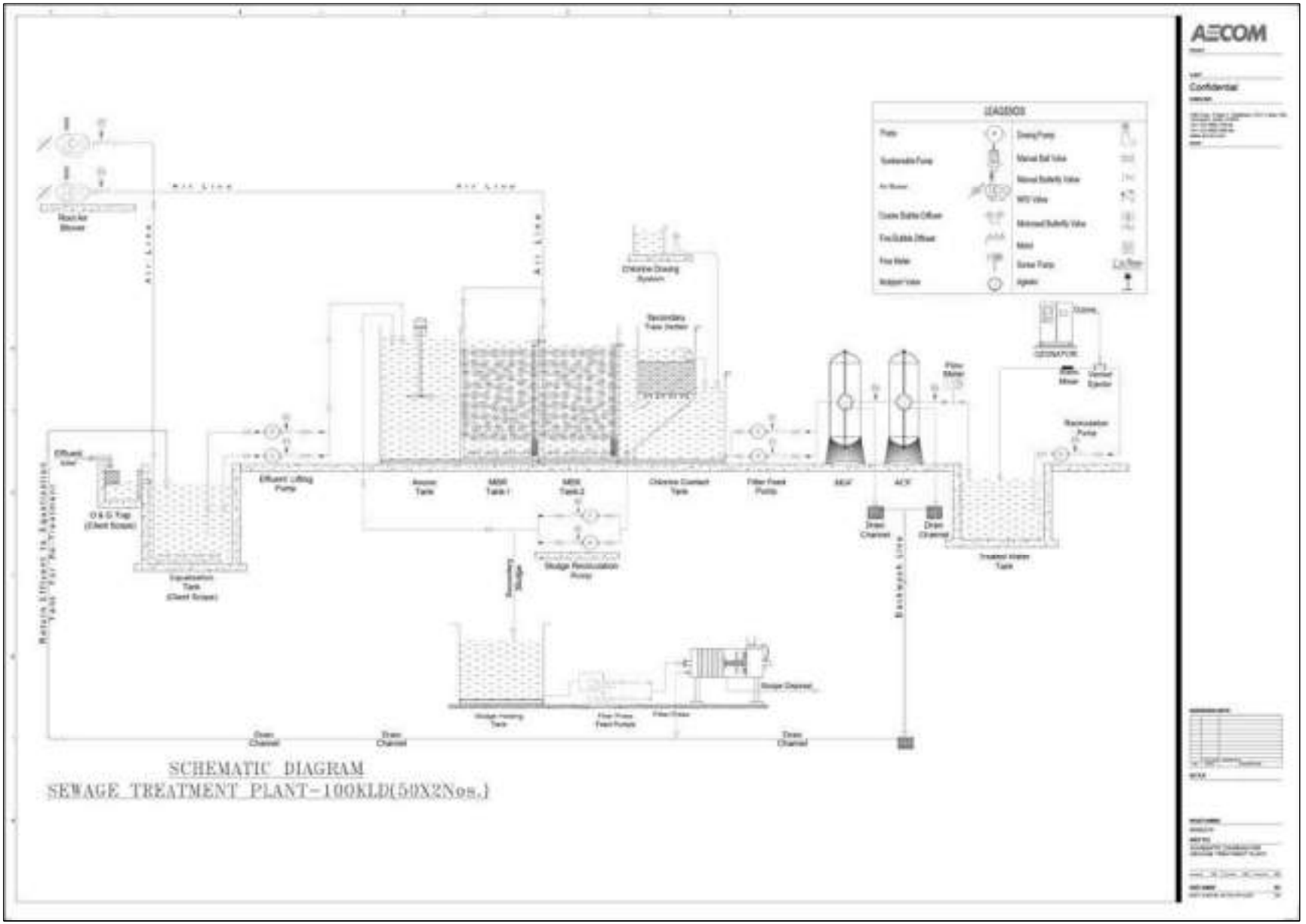
Technical Details of STP

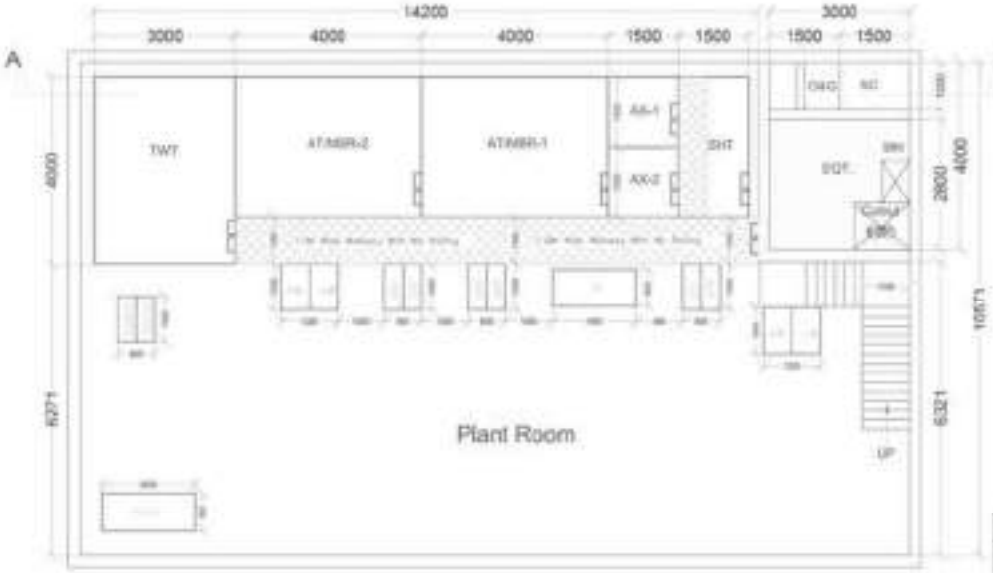
Sewage generation	**74 KLD**
Capacity	**2 Nos of STPs, of capacity 50 KLD**
Technology	**MBR**
Area Provided	**For STP: Approx. 200 sq. m.**
Capital Cost	**12 lakh**
O & M cost	**0.6 Lakh**

STP process schematic – 50 KLD P & I diagram of STP

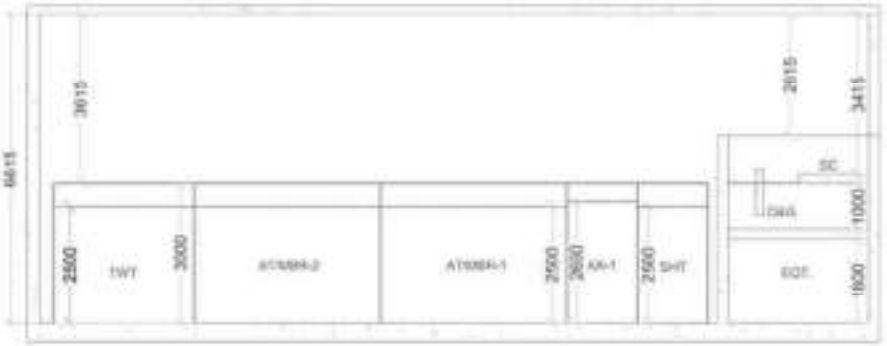


STP plan and section – 50 × 2 KLD





TENTATIVE LAYOUT PLAN



SECTION -AA

List Of Electromechanical Unit		
Mark	Description	Unit
RSTP	Raw Sewage Transfer Pump	2 No's
SRP	Sludge Recycling Pump	2 No's
PSP	Permeate Suction Pump	2 No's
TWTP	Treated Water Transfer Pump	2 No's
SP	Screw Pump	2 No's
FP	Filter Press	1 No
AB	Air Blower	4 No's

List Of Civil Tank						
Mark	Description	Length (M)	Width (M)	Height (M)	Depth (M)	Vol. M³
SC	Screen Chamber	1.5	1.5	1.5		
OWS	Oil & Grease Trap	3.5	1.5	2.5	1.5	3.00
EQT	Equalization Tank	4.5	3.5	4.5	3.7	32.40
List Of MS Tank						
AA-1	Anoxic Tank -1	1.5	1.5	3.5	2.5	5.85
AA-2	Anoxic Tank -2	1.5	1.5	3.5	2.5	5.85
AT-MBR-1	Aeration Tank	4.5	3.5	3.5	2.5	30.00
AT-MBR-2	Aeration Tank	4.5	3.5	3.5	2.5	30.00
TWT	Treated Water Tank	4.5	3.5	3.5	2.5	30.00
SHT	Sludge Holding Tank	3.5	1.5	3.5	2.5	11.25

AECOM

PROJECT

CLIENT

Confidential

CONSULTANT

19th Floor, Tower C, Building-5, DLF Cyber City, Gurugram, India 122002
+91 124 4682 700 tel
+91 124 4682 2004 fax
www.aecom.com

NOTES

ISSUE/REVISION HISTORY

NO	DATE	DESCRIPTION

KEY PLAN

PROJECT NUMBER

SHEET TITLE

GOLF DATA CENTER
STP LAYOUT & SECTION

SHEET NUMBER

Annexure No. 08: Energy Saving Measures

Sr. No.	Energy Conservation Measures	Saving %
1	LED Light Fixtures against Florescent/CFL fixtures	30% (Approximate)
2	Power factor improvement from 0.85 to 0.95 or higher	5 % (Approximate)
3	16 sq mm copper cable Vs 25 sq mm Al cable	2% (Approximate)
4	HVAC Energy saving Equipment's 1 star Vs 3 star	20% (Approximate)
5	Electrical starter Vs VFD	20% (Approximate)
6	Normal Fixture Vs Low Flow Fixtures in plumbing system	30% (Approximate)
7	Solar PV 35 to 40 kW	53,000 kWh (53 MWh)-Generation 2,44,658 kW/year

Saving of Electricity- Overall percentage of energy saving 2.68 %

Annexure No. 09: Letter submitted to MIDC for amendment to parking norms for Data Center Development

Data Center Holdings India LLP
K1, Phase III, Country Park, Opp. Tata Steel
Dattapada Road, Borivali (East),
Mumbai-400066,
Maharastra, India
Registration No.: AAM-2141
(A Limited Liability Partnership)

Date: 11th December 2018

To,

Mr. Nitin Kareer, IAS
Hon Principal Secretary,
Urban Development Department,
Govt of Maharashtra,
Mantralaya, Mumbai.

Subject: Request for Amendment to Parking Norms for Data Center Development

Dear Sir,

As a brief introduction, we, Data Center Holdings India LLP (DCHI), have acquired approximately 15 acres of land at TTC, MIDC, Navi Mumbai, and are anticipating development of an ultra large scale Tier III Data Center with proposed investment of around INR 3,400 Cr.

The proposed development is envisaged on following key parameters:

- An ITES certified Stage 1 of c. 60,000m² (FSI x 0.95) and an end-day gross floor area (GFA) of up to 94,000m² (FSI x 1.5),
- A Stage 1 net technical (IT/white space) area of 24,000m² and end-day 40,000m² (delivered in 500m² data halls across multiple phases)
- Net office and storage (for customers on site IT activities/personnel) of 7,400m²

The gross floor area as mentioned above will remain virtually unmanned area all the time in service as the same includes net technical (IT servers/white space) and utilities area. Only the net office area, at approx. 7,400m² will be occupied by the management and technical staff.

As per the DCR of MIDC, parking requirement for IT/ITES set ups are capped at 1 car park per 200m² of built up area, which in our case equates to approx. 500 cars plus additional guest and two-wheeler parking. As in our case, out of total end day development of 94,000m², only 7,400m² of built space will be for manned areas, and prudently same should be considered for calculation of parking requirement, in our opinion.

However, to accommodate the data center and IT technicians, alongside customers and visitors, we would request that adequate car parking provision suiting to Net office area

Urban Development
Mantralaya, Mum

development only be permitted from your side (noting that this would also allow us to provide more space for green areas on the campus).

As against the kind consideration to our request, we can even undertake to use this development all the time of its life cycle only for Data Center activity.

We hereby request your prompt action and suitable directives to MIDC at the earliest, only after which we can proceed with obtaining plan approvals and commencement of development work.

Yours Faithfully,

For Data Center Holdings India LLP

Ameet Nayak
Authorized Signatory

Cc.

Dr. P. Anbalagan	– CEO MIDC
Mr. Sachin Sankpal	– Induspro Sachin@induspro.in
Mr. Sujeet Deshpande	– Country Head, Chief Operating Officer Colt DCS (Sujeet.Deshpande@colt.net)
Mr. Bruce Stephenson	– Development Director Colt DCS (Bruce.Stephenson@colt.net)

Annexure No. 10: Application copy of wildlife NoC with reference to Thane Creek Flamingo Sanctuary and Google image showing distance from nearest thane creek flamingo sanctuary coordinate to our plot location

Data Center Holdings India LLP
2201 – 2202, 22nd Floor, Kesar Solitaire, Plot No- 5,
Palm Beach Rd, Sector 19, Sanpada,
Navi Mumbai, Maharashtra 400705
Registration No. AAM-2141 (A Limited Liability Partnership)

Ref: DCHI / Enviro / 001/2021

Date: 29th Jan 2021

To,

Shri. Tiwari V.R,

Additional Principal Chief Conservator of Forests

Office of the Addl. Principal Chief Conservator of Forests

& Mangrove Cell Head Mumbai.

Room No. 302 3rd Floor Wekfield House

Near Britannia Restaurant Ballard Estate,

Mumbai 400 001

Phone : 022-22694984

Subject: Submission of hardcopy of application for proposal No. FP/MH/Others/5688/2021 of Data Center Holdings India LLP

Dear Sir,

Kindly accept our submission of Hard copy of application for proposal No. FP/MH/Others/5688/2021 for WLS clearance for Phase 1A & 1B -Proposed Data Center Park by Data Center Holdings India LLP at plot 5 & 5A, Kalwa Industrial Area, MIDC, Thane, Belapur Road, Airoli –Navi Mumbai, Thane 400708

List of Documents attached-

1. Authorization letter
2. Wild Life Report
3. Scanned copy of Survey of India Toposheet
4. Scanned copy of Geo-referenced Map
5. Ecology & Biodiversity report
6. Certificate of employment generation
7. Environment Clearance Copy
8. Justification for locating project on eco-sensitive area
9. Details of projects undertaken by proponent agency
10. Compliance to condition
11. CC letter
12. LLP Agreement
13. MPCB Consent to Operate
14. Revised approved plans
15. Undertaking for legal disputes

Received
01/02/2021
लिपीक
आपर प्रधान मुख्य वनसंरक्षक (मँग्रोव्ह)
कांदळवन कक्ष, मुंबई.

Data Center Holdings India LLP
2201 – 2202, 22nd Floor, Kesar Solitaire, Plot No- 5,
Palm Beach Rd, Sector 19, Sanpada,
Navi Mumbai, Maharashtra 400705
Registration No. AAM-2141 (A Limited Liability Partnership)

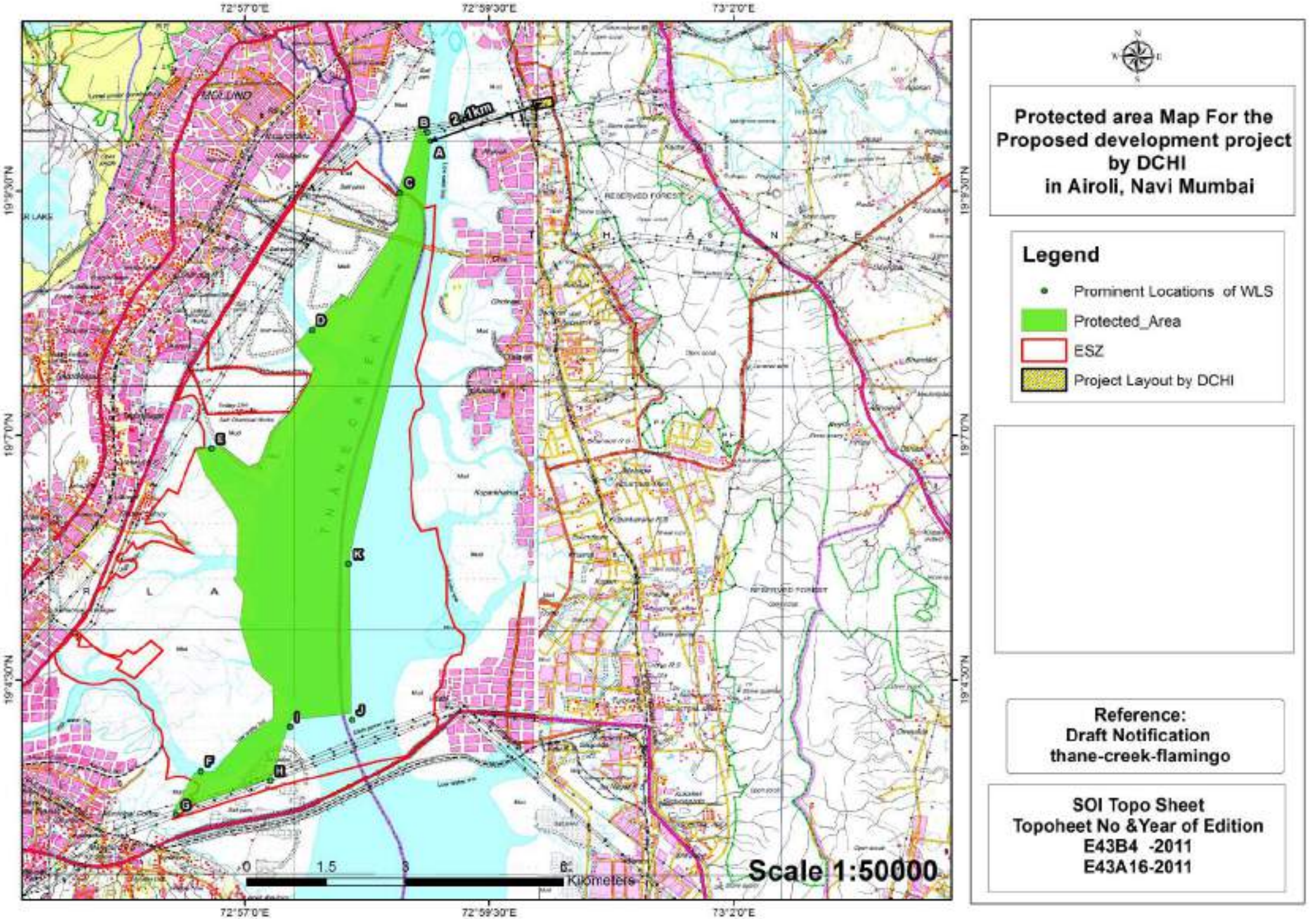
16. Undertaking of Project Cost
17. Detailed Project Report
18. Property card
19. CA certificate certifying project cost
20. 1:5000 scale Map showing project location and Kandalvan Forest and boundary of Thane Creek Flamingo Sanctuary

Thanking You,

DocuSigned by:
Sujeet Deshpande
8E90BD7A58A34C3...

Authorized Signatory

Data Center Holdings India LLP



Protected area Map For the Proposed development project by DCHI in Airoli, Navi Mumbai

Legend

- Prominent Locations of WLS
- Protected_Area
- ESZ
- Project Layout by DCHI

Reference:
Draft Notification thane-creek-flamingo

SOI Topo Sheet
Topoheet No &Year of Edition
E43B4 -2011
E43A16-2011

स्वातंत्र्याचा अमृत महोत्सव महाराष्ट्र वन विभाग

सत्यमेव जयते
महाराष्ट्र शासन
वनविभाग
विभागीय वन अधिकारी, मुंबई कांदळवन संधारण घटक
यांचे कार्यालय

दूरध्वनीक्र.022-25220097
ब- ६८, कामगार नगर, टिळकनगर स्टेशन जवळ, कुर्ला (पुर्व), मुंबई - ४०० ०२४
EmailId:dfommcu@gmail.com

जा.क्र.कक्ष-9/जमिन/2785 /सन 2021-22 दिनांक. 16 /03/2022.

प्रति,
मा. अपर प्रधान मुख्य वनसंरक्षक,
कांदळवन कक्ष,मुंबई.

विषय - Secure clarification on applicability of SBWL / NBWL / NOC for our project located at plot 5 & 5A, Kalwa Industrial Area, MIDC, Thane, Belapur Road, Airoli - Navi Mumbai, Thane - 400 708.

संदर्भ : १. Date Centre Holding India Llp., Kalwa यांच्याकडील पत्र क्र. SM/MV/003/2021 दिनांक 11/10/2021 रोजीचे पत्र
२. वनक्षेत्रपाल ठाणे खाडी फ्लेमिंगो अभयारण्य यांच्याकडील पत्र क्र.जमिन/893 दिनांक. 03/03/2022.

उपरोक्त संदर्भिय पत्र क्र. १ अन्वये विषयांकित प्रकरणी वनक्षेत्रपाल ठाणे खाडी फ्लेमिंगो अभयारण्य यांनी प्रत्यक्ष स्थळपाहणी करुन संदर्भिय पत्र क्र. २ अन्वये खालीलप्रमाणे अहवाल सादर केलेला आहे.

१. अर्जातील नमूद क्षेत्र मौजे दिघा ठाणे बेलापुर रोड डेटा सेंटर होल्डींग इंडिया एल.एल.पी प्लॉट नं.५ व ५अ मधील आहे.
२. अर्जातील नमूद क्षेत्र हे अधिसुचित राखीव कांदळवनाचा भाग नाही.
३. स्थळपहाणीच्या वेळी प्रत्यक्ष जागेवर घेतलेले जी.पी.एस. रिडींग गुगल खालीलप्रमाणे आहेत.
   1. N 19 10.431 E 072 59.976 2. N 19 10.354 E 072 59.980
४. वरील जी.पी.एस. रिडींग गुगल अर्थवर घेऊन MRSAC नकाशाच्या सहाय्याने सुपर इंम्पोज करुन तपासले असता सन २००५ साली सदर क्षेत्रावर कांदळवन दिसून येत नाही. तसेच सद्यास्थितीत कांदळवन दिसून येत नाही.
५. अर्जातील नमूद क्षेत्र हे बफर झोन मध्ये येत नाही.
६. अर्जातील नमूद क्षेत्र "ठाणे खाडी फ्लेमिंगो अभयारण्य" च्या पर्यावरण संवेदनशील (ESZ) क्षेत्राच्या बाहेर आहे.

(एम.आदेश रेड्डी) 16/3/22
विभागीय वन अधिकारी
मुंबई कांदळवन संधारण घटक

प्रत - सहाय्यक वनसंरक्षक, कांदळवन संरक्षण, मुंबई यांना माहितीसाठी अग्रेषित.
प्रत- Shri. Sujit Deshpande, data center holding india llp, 5/5a, kalwa industrial Area यांना संदर्भिय पत्र क्र. 1 अन्वये माहितीसाठी रवाना.