PART-A

(To be submitted by Project proponent to Planning Authority)

			Particulars	Page No.
1			Executive Summary of the project	
2			Duly filled Form I as per annexure IV of CRZ Notification 2011 (Compulsory for all Projects)	
3			Whether proposed project covered under EIA Notification 2006	No
	a		If yes, duly filled Form I & IA (As per provision 4 (i)(d)and 4(ii)(a)of CRZ Notification,2011)	
	b		CRZ map indicating HTL & LTL demarcated by one of the authorized agency in 1:4000 scale (as per para (2) of CRZ Notification, 2011) on the approved CZMP of the area showing the site under consideration	
4			Introduction of the Project Background information indicating following :	
	i		Identification of the project & project proponent landownership indicating CTS No. /Survey Nos. etc.	
	ii		Brief description of nature of the project with details including Layout Plan, Building Floor Plan etc.	
	iii		Need for the project & its importance	
	iv		Demand supply gap or information on similar projects in the region	
5	i		Location of the project showing general location, specific location Project boundary, project site approved layout with coordinates from competent Authority	
	ii		Details of the alternative sites considered from environmental point of view	
6			Site Analysis	
	i		Area of the project site (in sq. m)	

	ii		Connectivity	
	Iii		Land form, land use, Land ownership	
	Iv		Topography (along with map)	
	V		Existing land use pattern (agriculture, non-agriculture, forest, water bodies shortest distances from the periphery of the project to periphery of the forest, national park, wild life sanctuary, eco-sensitive area, water bodies (distance from the HFL of the river). In case of notifies industrial area, a copy of the Gazette notification should be given)	
	vi		Social Infrastructure available	
7			Planning Brief	
	i		Planning concept (type of Industries, facilities, transportation etc.) Town & Country planning/ Development Authority Classification	
	ii		Population projection	
	iii		Land use planning (breakup along with green belt etc.)	
	iv		Assessment of Infrastructure Demand (Physical & Social)	
	V		Amenities / Facilities (existing & proposed	
	Vi		Proposed use	
	Vii		FSI proposed to be consumed	
	viii		Whether lift, lobby, staircase etc. are claimed free of FSI & if so whether they are permissible (if so mention the provision of DCR)	
8			Proposed Infrastructure	
	i		Industrial area (Processing Area)	
	ii		Residential Area (Non processing Area)	
	iii		Green Belt/ Afforestation details	
	iv		Social Infrastructure	
	v		Connectivity (Traffic & Transportation Road / Rail/ Metro/ Water ways etc.)	
	vi		Drinking Water Management (Source & supply of water)	
	vii		Sewerage System.	
	viii		Industrial Waste Management	
	ix		Solid Waste Management	
	x		Power requirement & Supply/ Source	
9			Rehabilitation & Resettlement (R & R	

			)plan	
	i		Policy to be adopted(central state) in respect of the project affected persons including home oustees, land oustees & landless labourers (a brief outline to be given)	
	ii		Proposed detailed action plan for mangroves re plantation (if any)	
10			Project Schedule & Cost Estimates	
	i		Likely date of start of construction & likely date of completion (Time schedule for the project to be given)	
	ii		Estimated project cost along with analysis in terms of economic viability of the project	
	iii		Share holding of the developer	
	iv		Share holding of the state government	
11			Analysis of proposal (Final Recommendations)	
	i		Environmental cost benefit analysis including financial & social benefits with special emphasis on the local people including tribal population, if any, in the area	
12	i		Rapid EIA report including marine & terrestrial component except for construction projects listed under 4(c), 4(d) of CRZ Notification 2011 (Not applicable for building proposal)	
	ii		Comprehensive EIA with cumulative studies for projects in the stretches classified as low & medium eroding by MoEF based on scientific studies & in consultation with the state Governments and Union Territory Administration (as per provision of 4.2 (c) of CRZ Notification, 2011) (Not applicable for building proposal)	
	iii		Disaster Management Report, Risk Assessment Report & Management plan (As per provision of 4.2 (d)of CRZ Notification, 2011)	
	iv		Photographs & Google images of the site indicating existing status & location of the site	

	v		CRZ map indicating HTL and LTL and CRZ classification by one of the authorized agencies by MoEF in 1:4000 scales and project layout superimposed on the above map of CZMP (As per provision 4.2(e) and (f) of CRZ Notification, 2011)	
	vi		The CRZ map normally covering 7 km radius around the project (for ports, harbours, jetties, infrastructure projects)(as per provision 4.2 (g) of CRZ Notification, 2011)	
	vii		NOC form MPCB for projects involving significant discharge of effluents, solid wastes, sewage and the like (as per provision 4.2(i)of CRZ notification, 2011)	
13			Attached following No. Objection Certificates (if applicable)	
	i		Heritage Conservation	
	ii		State Ground Water Board	
	iii		Maharashtra Pollution Control Board	
	iv		High Court	
	v		Maritime board	
	vi		Port Trust	
	vii		Civil Aviation	
	viii		High Rise Committee	
14			Applicable for SRA / Cessed/ Dilapidated/ Unsafe Building	
			Undertaking of the project proponent for the development through slum Rehabilitation Scheme along with the state Government to ensure that all legally regularized tenants are provided houses in situ or as per norms laid down by the State Government in this regard (as per the provision of B(v)(2)(iii) of CRZ Notification, 2011)	
15			Undertaking of the project proponent to agree to be covered under the Right to Information Act.2005 (as per the provision B(v)(c)(d)(v)of CRZ Notification 2011)	
16			Public consultation Report (as per provision B(v)(4)of CRZ Notification, 2011)	
17			Stake of the state Govt. or its parietal	

			entities (which should not be less that 51%)in the project (as per provision B(v)(1)(ii)(b)(2)(i)of CRZ Notification 2011	
18			Any other information relevant to the proposal	

1) Executive Summary of the Project

M/s. Shivshankar Builders & Developers, PLOT NO. - 5, 6 & 7, SECTOR-20 B, at G.E.S.Airoli, Navi Mumbai, Dist. Thane.
The land under reference falls in CRZ – II and is situated on the landward side of 30.00 mt wide existing Road. The details of the proposal are as under:
Plot area of proposed project is 5349.81 Sq.mt. which is in CRZ II area on the landward side of 30.00 mt wide existing road. Construction of proposed project will be under taken with FSI of 1.5 The proposed Residential building comprises of Stilt + 1^{st} floor podium + 2^{nd} floor podium +3^{rd} to 31^{st} floor. The project cost is
Rs. 41, 41, 64,224.00/-The proposed building will have Wing
'A' 58,Wing 'B' 58 & Wing 'C' 58=174 tennants.
The population of the building during operation phase is 1044.
Total water requirement for this population will be 208.80 m3/day. Sewage generation out of it will be 167.04m^3/day. Sewage generated will be treated using Membrane Bio Reactors (MBR). Total waste generated from building will be 62 kg/day and biodegradable component will be composted using Vermi Composting Pit. Dry garbage will be recycled.
A total of 131 car parking provision is made.

ANNEXURE - IV

FORM 1 for seeking clearance for projects attracting CRZ notification

(I) Basic Information

Sr. No.	Item	Details		
1	Name of the project/s	Proposed building PLOT NO. - 5, 6 & 7, SECTOR-20 B,at G.E.S.Airoli, Navi Mumbai, Dist. Thane.		
2	Location or site alternatives under consideration	This is a Residential Project on our own land, according to Development Plan of NMMC		
3	Size of the project (in terms of total area)	Total Plot Area	**5349.81**	m2
		Built Up Area		
		Total Built up area proposed	**8020.78**	m2
		Total Construction area proposed	**28822.60**	m2
		Detail Area Statement is attached as Annexure I		
4	CRZ Classification of the area	CRZ - II		
5	Cost of the project	Rs. 41, 41, 64,224.00/-		
6	Contact information	M/s. Shivshankar Builders & Developers, PLOT NO. - 5, 6 & 7, SECTOR-20 B,at G.E.S.Airoli, Navi Mumbai, Dist. Thane. Mobile No: -9833101028 Email: manishkarnik50@yahoo.in		

(II) Activity

1. **Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, and the like)**

Sr. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan)	Yes	Permanent change in land use Land reserved for Residential Development
1.2	Details of CRZ classification as per the approved Coastal Zone Management Plan	Yes	CRZ - II
1.3	Whether located in CRZ-I area?	No	
1.4	Distance from CRZ-I areas	No	
1.5	Whether located within the hazard zone as mapped by Ministry of Environment and Forests/ National Disaster Management Authority?	No	
1.6	Whether the area is prone to cyclone, tsunami, tidal surge, subduction, earthquake etc.?	No	
1.7	Whether the area is prone for saltwater ingress?	No	
1.8	Clearance of existing land, vegetation and buildings?	No	
1.9	Creation of new land uses?	No	Land uses for Residential purpose
1.10	Pre-construction investigations e.g. bore hole, soil testing?	Yes	Soil samples taken within the plot premises for geotechnical investigation
1.11	Construction works?	Yes	Proposed Residential project
1.12	Demolition works?	Yes	Excess debris material will be sent to the authorized debris disposal site as per debris management rules
1.13	Temporary sites used for	Yes	Temporary sheds will be provided for

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	construction works or housing of construction workers?		workers
1.14	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	Yes	Total Excavation quantity: 3000 m^3
1.15	Underground works including mining or tunneling?	No	
1.16	Reclamation works?	No	
1.17	Dredging/reclamation/land filling / disposal of dredged material etc.?	No	
1.18	Offshore structures?	No	
1.19	Production and manufacturing processes?	No	This is Construction project
1.20	Facilities for storage of goods or materials?	Yes	Only construction material will be stored in temporary storage site
1.21	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	Municipal Solid Waste Disposal System
1.22	Facilities for long term housing of operational workers?	No	
1.23	New road, rail or sea traffic during construction or operation?	Yes	Movements of trucks for material transport while construction
1.24	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	No	Existing road will be used for movements of trucks for material transport while construction
1.25	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	
1.26	New or diverted transmission lines or pipelines?	No	
1.27	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses	No	

	or aquifers?		
1.28	Stream and river crossings?	No	
1.29	Abstraction or transfers of water form ground or surface waters?	No	
1.30	Changes in water bodies or the land surface affecting drainage or run-off?	No	There will not be any changes in water bodies or the land surface
1.31	Transport of personnel or materials for construction, operation or decommissioning?	Yes	Construction workers and construction material
1.32	Long-term dismantling or decommissioning or restoration works?	No	
1.33	Ongoing activity during decommissioning which could have an impact on the environment?	No	There will not be any impact on the Environment
1.34	Influx of people to an area in either temporarily or permanently?	No	Only construction workers will stay till construction completes
1.35	Introduction of alien species?	No	No introduction of alien species will occur as this is purely residential project
1.36	Loss of native species or genetic diversity?	No	No threat of species loss will occur
1.37	Any other actions?	No	No

2. Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):

Sr. No.	Information/checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
2.1	Land especially undeveloped or agricultural land (ha)	No	
2.2	Water (expected source & competing users) unit: KLD	Yes	Total water requirement 208.80 m^3/day, Water supply from NMMC Detail Water Balance Statement is attached as Annexure II
2.3	Minerals (MT)	No	
2.4	construction material – stone, aggregates, sand / soil (expected source – MT)	Yes	Stone aggregates demand will be met from the clay/soil generated after excavation and cutting of rocks
2.5	Forests and timber (source – MT)	Yes	Only door frames (if so planned)
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	Total Energy Consumption will be 0.15 MW
2.7	Any other natural resources (use appropriate standard units)	No	

3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.

Sr. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
3.1	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)	No	No hazardous material will be used for construction
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	
3.3	Affect the welfare of people e.g. by changing living conditions?	No	Proposed project will not affect the welfare of people

3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	No	Proposed project will not affect hospital patients, children etc.
3.5	Any other causes, that would affect local communities, fisher folk, their livelihood, dwelling units of traditional local communities etc.	No	

4. Production of solid wastes during construction or operation or decommissioning (MT/month)

Sr. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
4.1	Spoil, overburden or mine wastes	No	
4.2	Municipal waste (domestic and or commercial wastes)	Yes	Total Municipal Solid Waste generated will be 106 kg/day
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	No	No hazardous waste will be generated as this is residential project
4.4	Other industrial process wastes	No	No, this is Residential Project
4.5	Surplus product	No	Not Applicable
4.6	Sewage sludge or other sludge from effluent treatment	No	
4.7	Construction or demolition wastes	Yes	Total quantity of debris generated will 200 m^3
4.8	Redundant machinery or equipment	No	Not Applicable
4.9	Contaminated soils or other materials	No	Not Applicable
4.10	Agricultural wastes	No	Not Applicable
4.11	Other solid wastes	No	Not Applicable

5. Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)

Sr. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources	No	Not Applicable
5.2	Emissions from production processes	No	Not Applicable
5.3	Emissions from materials handling including storage or transport	Yes	Fugitive emission from handling such as sand
5.4	Emissions from construction activities including plant and equipment	Yes	transportation of construction material, DG sets etc.
5.5	Dust or odors from handling of materials including construction materials, sewage and waste	Yes	Transportation, loading and unloading of material will generated dust
5.6	Emissions from incineration of waste	No	Not Applicable
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	Not Applicable
5.8	Emissions from any other sources	No	Not Applicable

6. Generation of Noise and Vibration, and Emissions of Light and Heat:

Sr. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	Yes	Construction Equipment, mixers, vehicles etc.
6.2	From industrial or similar processes	No	Not Applicable
6.3	From construction or demolition	Yes	Minor construction machinery as Ready Mix Concrete is to be used
6.4	From blasting or piling	No	

6.5	From construction or operational traffic	Yes	By movement of trucks for material & Ready Mix Concrete
6.6	From lighting or cooling systems	No	Not Applicable
6.7	From any other sources	No	Not Applicable

7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:

Sr. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
7.1	From handling, storage, use or spillage of hazardous materials	No	Not Applicable
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	No	Sewerage will be connected to Municipal drainage.
7.3	By deposition of pollutants emitted to air into the land or into water	No	Not Applicable
7.4	From any other sources	No	Not Applicable
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	No	Not Applicable

8. Risk of accidents during construction or operation of the Project, which could affect human health or the environment

Sr. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances	No	Not Applicable
8.2	From any other causes	No	Not Applicable
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst etc)?	No	The proposed structure is designed as per Seismic Zone III standards

9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality

Sr. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
9.1	Lead to development of supporting. facilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.: • Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) • housing development • extractive industries • supply industries	No	Not Applicable

	• other		
9.2	Lead to after-use of the site, which could have an impact on the environment	No	Not Applicable
9.3	Set a precedent for later developments	No	Not Applicable
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	No	Not Applicable

(III) Environmental Sensitivity

Sr. No.	Areas	Name/Identity	Aerial distance (within 15 km.) Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	No	
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Yes	Nerul Lake: 1.5 km Arabian Sea: 1 km
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	No	
4	Inland, coastal, marine or underground waters	Yes	Nerul Lake: 1.5 km Arabian Sea: 1 km
5	State, National boundaries	No	
6	Routes or facilities used by the public for access	No	

	to recreation or other tourist, pilgrim areas		
7	Defense installations	No	
8	Densely populated or built-up area	Yes	Fully urbanized area
9	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	Yes	Hospitals, schools, colleges, community facilities & places of worship are present around the Project site.
10	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	No	
11	Areas already subjected to pollution or environmental damage. (those where existing legal environmental standards are exceeded)	No	
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions)	No	

Annexure I

Area Statement

AREA STATEMENT		
AREA OF THE PLOT		5349.81 SQ.MT
A	PERMISSIBLE F.S.I	1.5
B	PERMISSIBLE B.U.AREA	8024.715
C	NET BUILT-UP AREA ON	SQ.MT
	GROUND	----
	1ST FLOOR	----- SQ.MT
	2ND FLOOR	----- SQ.MT
	3RD FLOOR	323.99 SQ.MT
	4TH FLOOR	255.46 SQ.MT
	5TH FLOOR	255.46 SQ.MT
	6TH FLOOR	323.99 SQ.MT
	7TH FLOOR	255.46 SQ.MT
	8TH FLOOR	255.46 SQ.MT
	9TH FLOOR	323.99 SQ.MT
	10TH FLOOR	255.46 SQ.MT
	11TH FLOOR	255.46 SQ.MT
	12TH FLOOR	323.99 SQ.MT
	13TH FLOOR	255.46 SQ.MT
	14TH FLOOR	255.46 SQ.MT
	15TH FLOOR	323.99 SQ.MT
	16TH FLOOR	255.46 SQ.MT
	17TH FLOOR	255.46 SQ.MT
	18TH FLOOR	323.99 SQ.MT
	19TH FLOOR	255.46 SQ.MT

	20TH FLOOR	255.46 SQ.MT
	21ST FLOOR	323.99 SQ.MT
	22ND FLOOR	255.46 SQ.MT
	23RD FLOOR	255.46 SQ.MT
	24TH FLOOR	323.99 SQ.MT
	25TH FLOOR	255.46 SQ.MT
	26TH FLOOR	255.46 SQ.MT
	27TH FLOOR	323.99 SQ.MT
	28TH FLOOR	255.46 SQ.MT
	29TH FLOOR	255.46 SQ.MT
	30TH FLOOR	262.07 SQ.MT
	31ST FLOOR	244.36 SQ.MT
D	TOTAL B.U.A	8020.78 SQ.MT
E	PROPOSED F.S.I	1.49 SQ.MT
F	BALANCE AREA	3.93 SQ.MT
G	TOTAL RESIDENTIAL AREA	8020.78 SQ.MT
H	TOTAL COMMERCIAL AREA	--- SQ.MT

Annexure II

Water Balance

Particulars	No of Flats /units	Occupancy	Total Population	Water Requirement Basis (lit/day)	Water Demand m^3/day
Residential					
Flats	174	6	1044	200	208.80
Total			**1044**		**208.80**
Sewage Generation				**80% of total water requirement**	**167.04**
Recycling for Flushing					
Residential					
Flats	174	6	1044	45	46.98
Total			**1044**		**46.98**
Gardening					
Sludge				**1% of Sewage Generation**	**0.47**
Excess Treated Sewage to Municipal sewer lines					**46.98**

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Annexure III

Location Plan

Para No. 12

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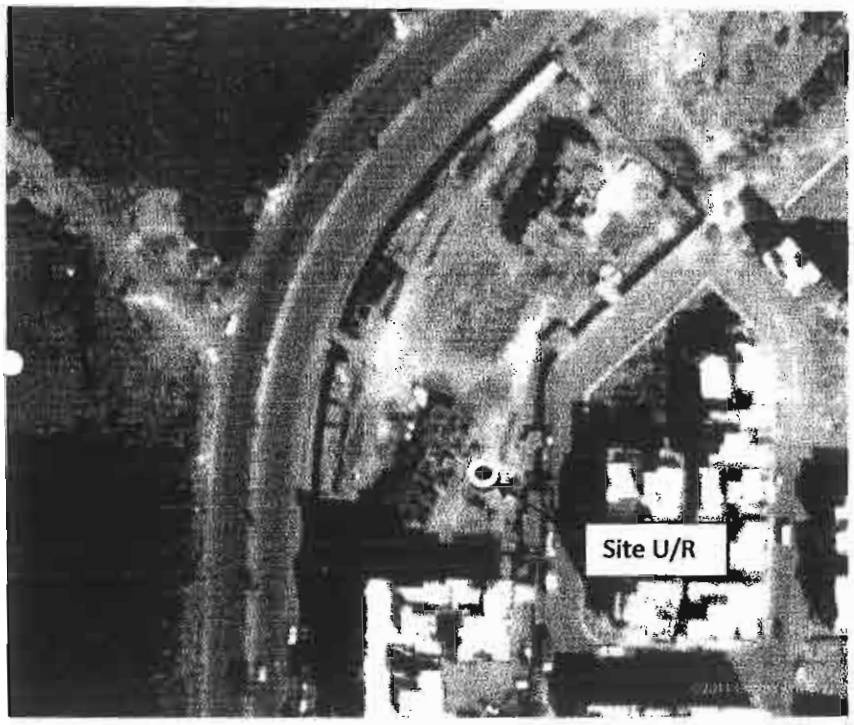
To see all the details that are visible on the screen, use the Print link next to the map.



2) Whether Proposed Project covered under EIA Notification 2006

The proposed project does not covered under EIA Notification 2006 as total construction area is less than 20,000 m^2

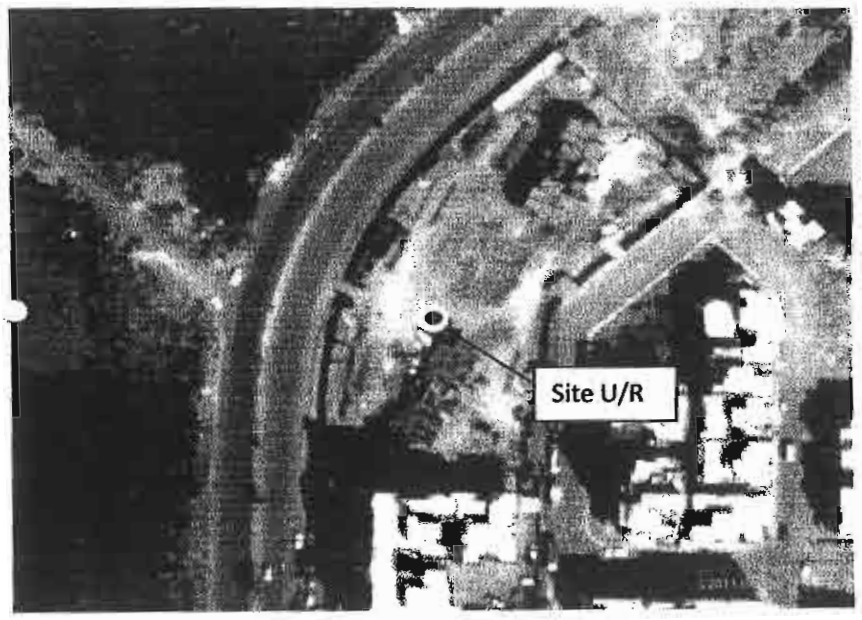
3) Introduction of the Project Background Information

I. Identification of the project & project proponent landownership indicating CTS No. /Survey Nos. etc.

M/s. Shivshankar Builders & Developers, PLOT NO. - 5, 6 & 7, SECTOR-20 B,at G.E.S.Airoli, Navi Mumbai, Dist. Thane

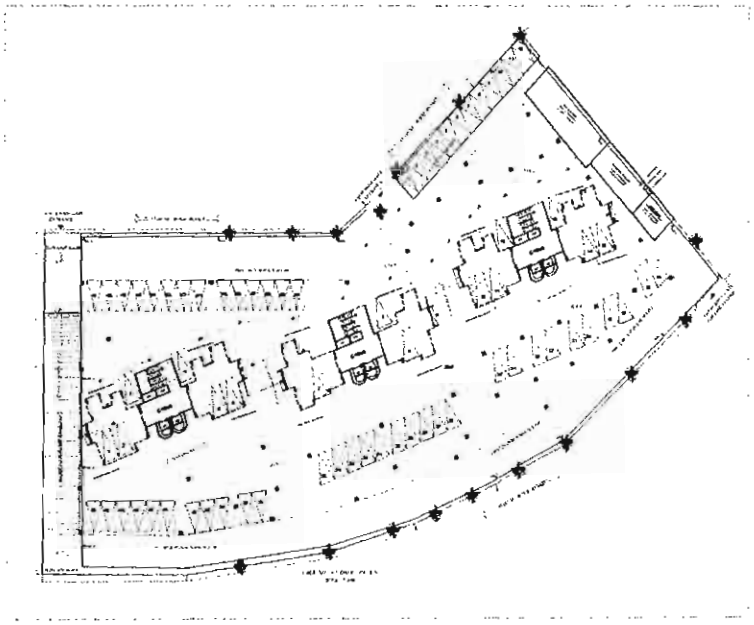
Location Plan of the Project is given herewith:

Para No 12

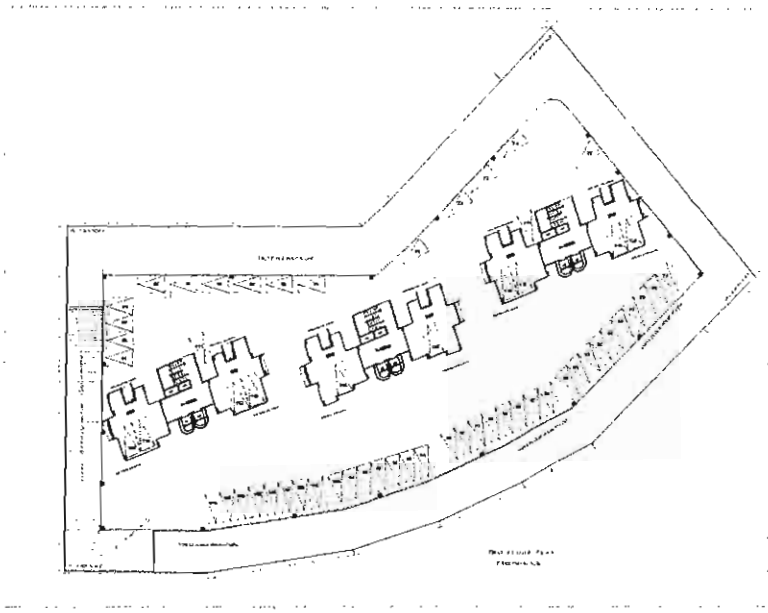


II. Brief description of nature of the project with details including Layout Plan, Building Floor Plan etc.

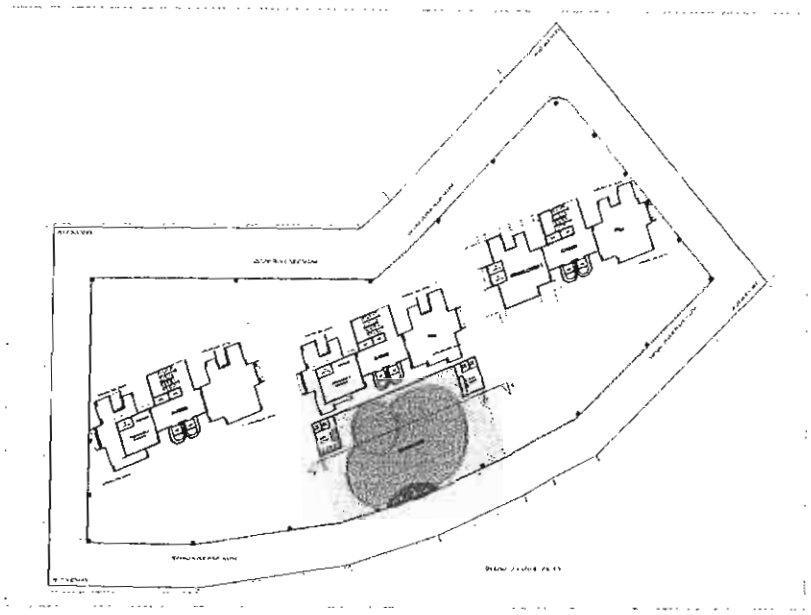
The proposed project is Residential Development at Nerul,Navi Mumbai; which falls in CRZ II area. Layout Plan and Building Floor Plans are attached herewith.



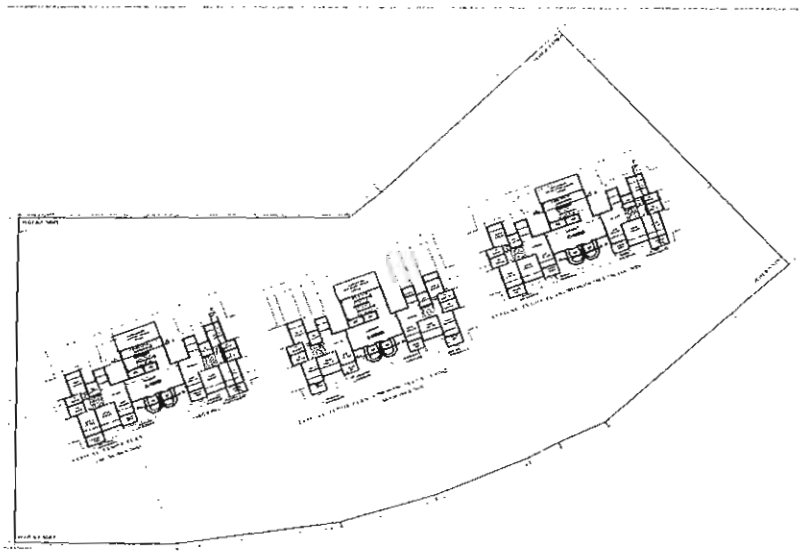
Ground Floor Plan



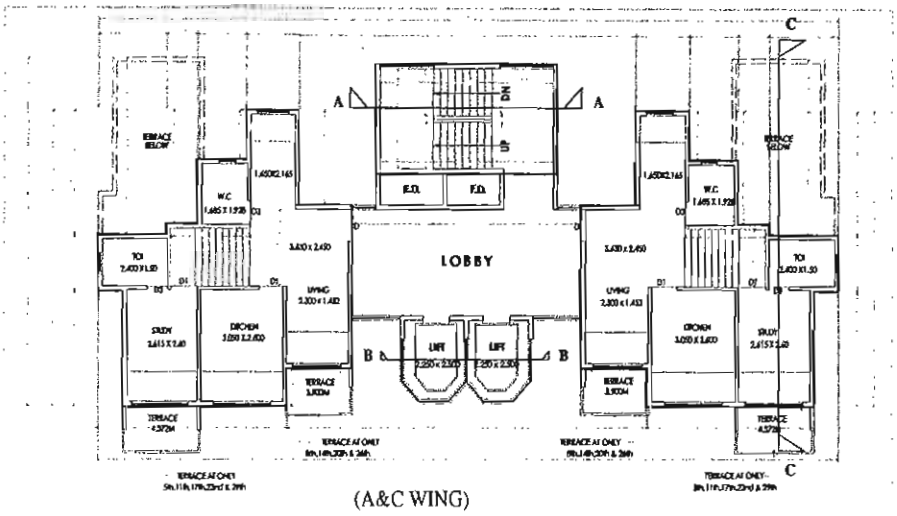
1st Floor Plan



2nd Floor Plan

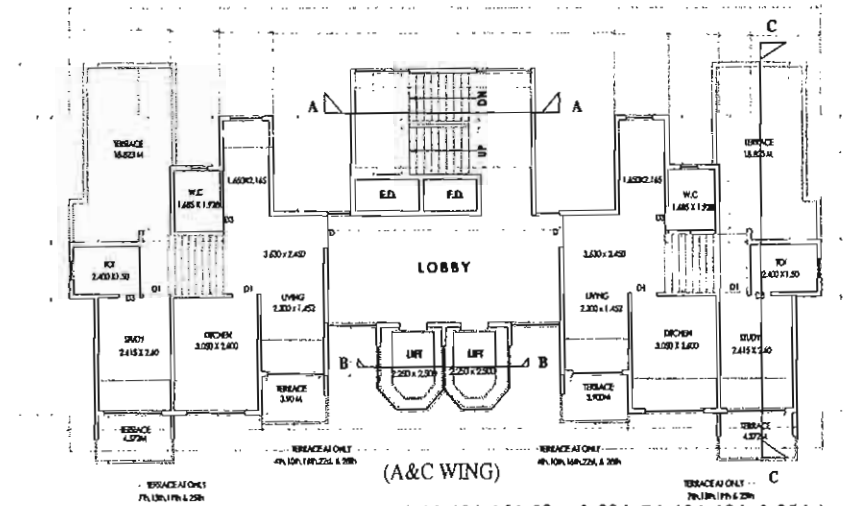


TYPICAL FLOOR PLAN (3RD,9th,15th,21th & 27th)
(6th,12th,18th & 24TH)



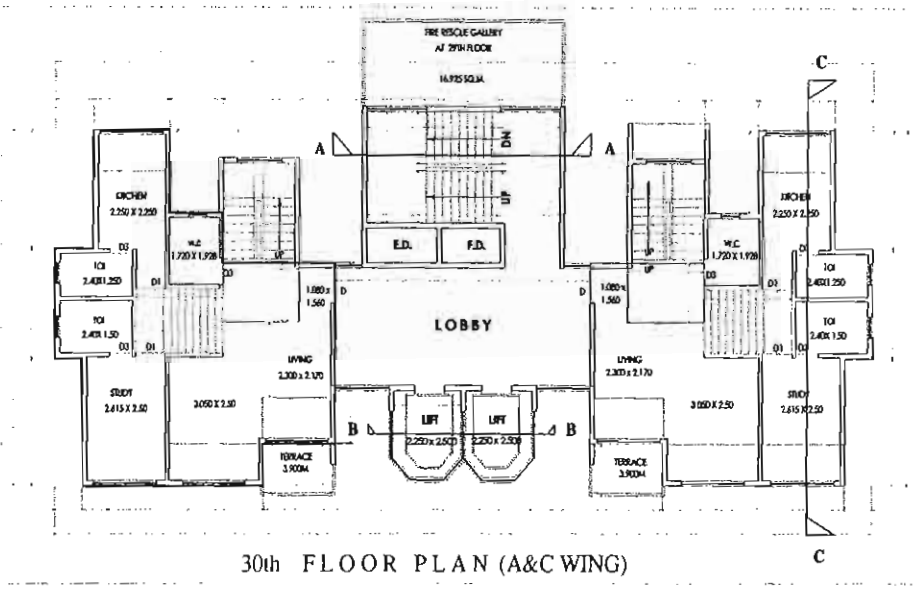
TYPICAL FLOOR PLAN (8th,14th,20th & 26th , 5th,11th,17th,23nd & 29th)

(A&C WING)
TYPICAL FLOOR PLAN
(8th,14th,20th & 26th , 5th,11th,17th,23nd & 29th)



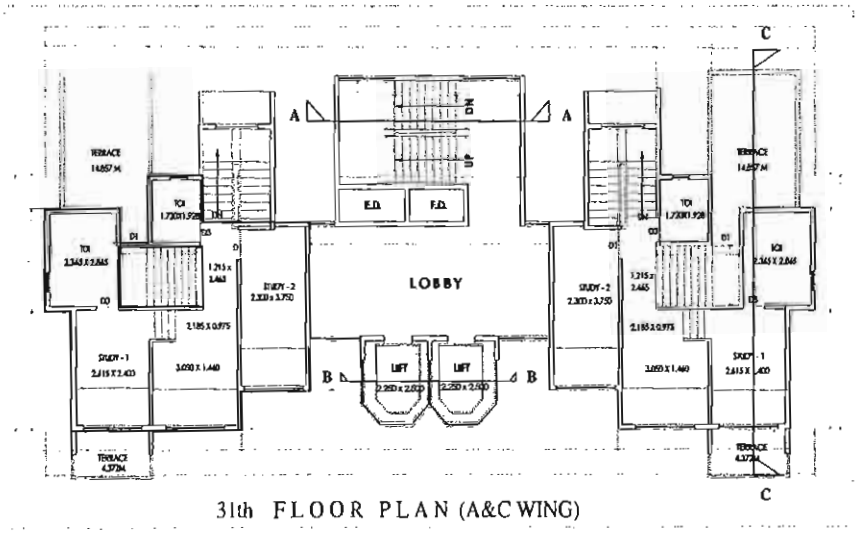
TYPICAL FLOOR PLAN (4th,10th,16th,22st, & 28th,7th,13th,19th & 25th)

(A&C WING)
TYPICAL FLOOR PLAN
(4th,10th,16th,22st, & 28th, 7th,13th,19th & 25th)



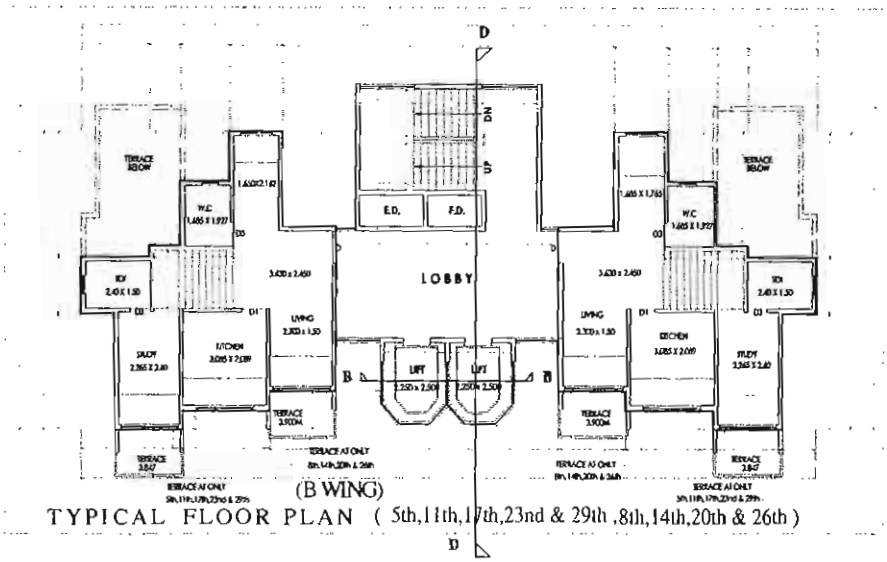
30th FLOOR PLAN (A&C WING)

30th FLOOR PLAN (A&C WING)

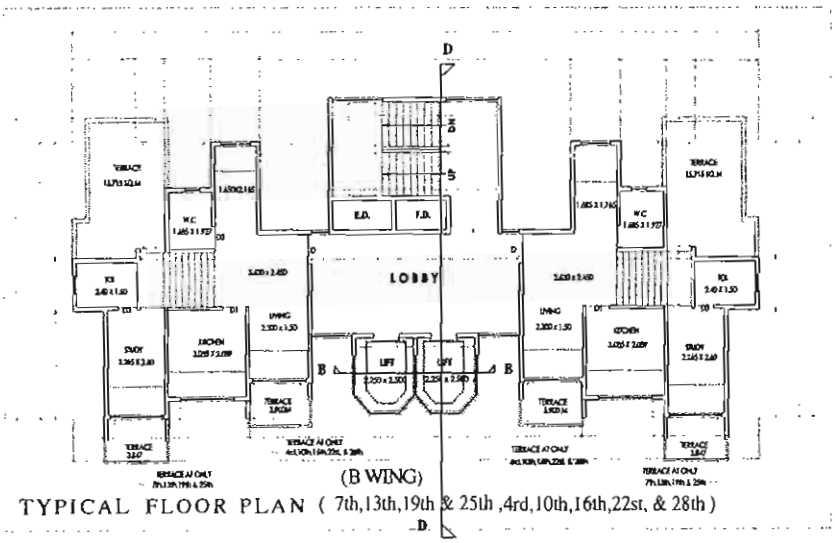


31th FLOOR PLAN (A&C WING)

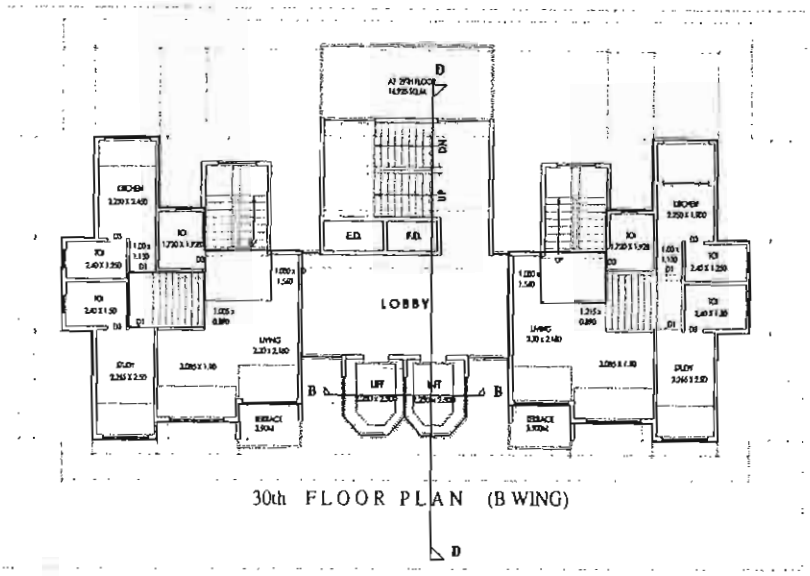
31ST FLOOR PLAN (A&C WING)



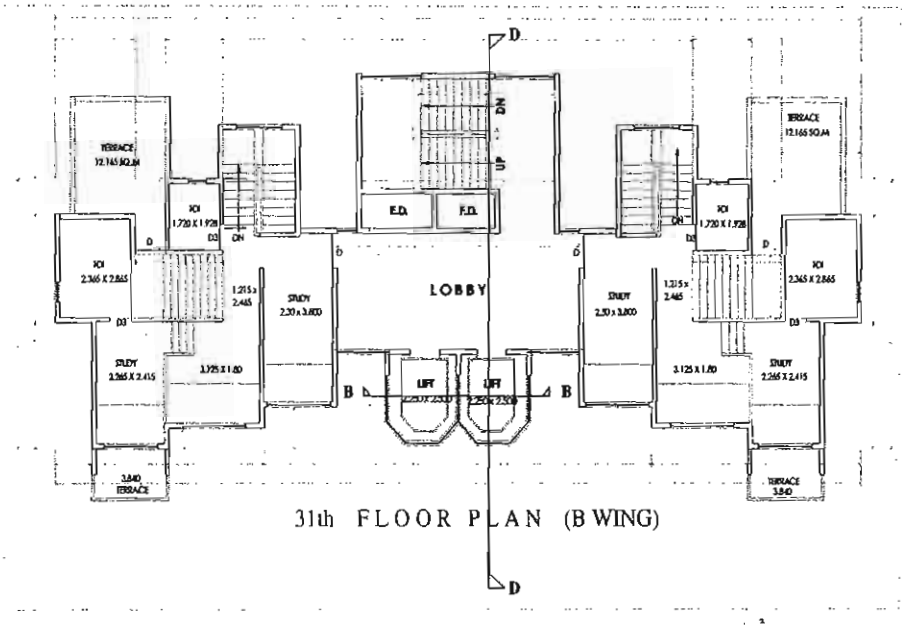
(B WING)
TYPICAL FLOOR PLAN (5TH,11TH,17TH.23ND & 29TH 8TH,14TH,20TH & 26TH)



(B WING)
TYPICAL FLOOR PLAN (7TH,13TH,19TH & 25TH,4TH,16TH,22ND & 28TH)



30th FLOOR PLAN (B WING)



31ST FLOOR PLAN (B WING)

III. Need for the project & its importance

- ✓ **Plot reserved for Residential Development as per Development Plan attached.**

- ✓ **As this plot is reserved for Residential Development we are providing High End Residential units**

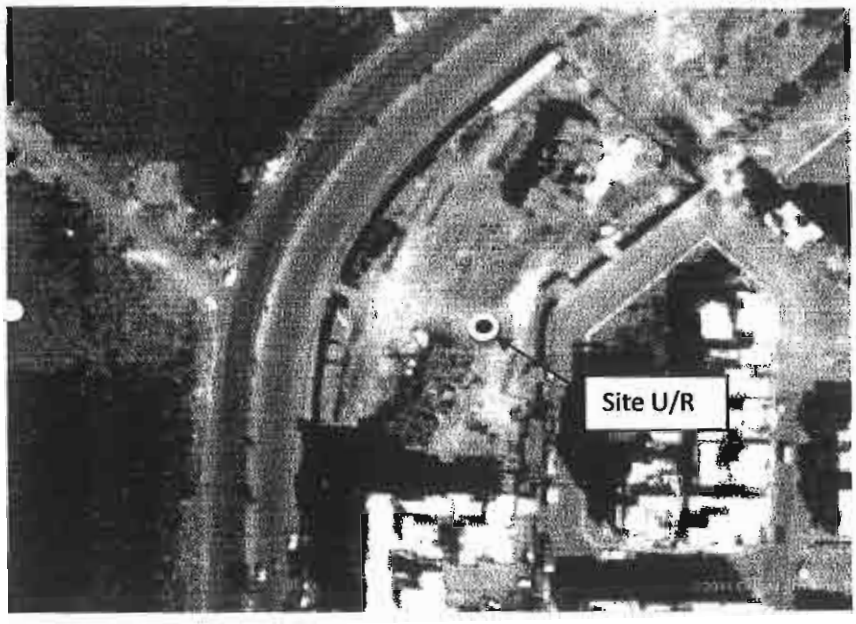
IV. Demand supply gap or information on similar projects in the region

4) Location of the Project

Para No. 12

Go gle

To see all the details that are visible on the screen, use the Print link next to the map.



5) Site Analysis

Sr. No.	Particulars	Details
1.	Area of the Project Site	**5349.81** Sqmt
2.	Connectivity	✓ Site is access by 30.00 mt wide existing Road ✓ Proposed site is 30.00 mt wide existing Road
3.	Land Form, Land Use, Land Ownership	Land Own by Us
4.	Topography (along with map)	Levelled plot
5.	Existing land use pattern	
6.	Social Infrastructure available	Hospitals, Schools, Colleges, Community Facilities & Places of Worship are present around the project site

6) Planning Brief

Sr. No.	Particulars	Details	
1.	Planning concept (type of industries, facilities, transportation etc.) Town & Country Planning / Development Authority Classification		
2.	Population Projection	Total Population staying:No. 1044	
3.	Land Use Planning (break up along with green belt etc)	Plot Area	828.30Sq.mt
		FSI Area	8020.78 m2
		Non – FSI Area	7290.92 m2
		Construction Area	28822.60 m2
		Landscape Area	
4.	Assessment of Infrastructure Demand (Physical & Social)		
5.	Amenities / Facilities (Existing & Proposed)	Proposed Amenities: Nil	
6.	Proposed Use	Residential Use	
7.	FSI Proposed to be consumed	1.5	
8.	Whether lift. Lobby, staircase etc. Are claimed free of FSI & if so whether they are permissible (if so mention the provision of DCR)	Yes.	

7) Proposed Infrastructure

Sr. No.	Particulars	Details
1.	Industrial Area (Processing Area)	--
2.	Residential Area (Non Processing Area)	Plot Area: **5349.81**m^2
3.	Green Belt / Afforestation Details	N.A
4.	Social Infrastructure	Hospitals, Schools, Colleges, Community Facilities & Places of Worship are present around the project site
5.	Connectivity (Traffic & Transportation Road / Rail / Metro / Water Ways etc)	✓ Site is access by 30.00 mt wide existing Road ✓ Proposed site is 30.00 mt wide existing Road
6.	Drinking water Management (Source & Supply of Water)	Drinking water supply for proposed project will be met from NMMC
7.	Sewerage System	Proposed site is well access to Municipal Sewer Lines
8.	Industrial Waste Management	Not Applicable
9.	Solid Waste Management	Total Solid Waste generated from proposed project will be 62 kg/d. Which will be composted by using Vermi Composting Technology
10.	Power Requirement & Supply Source	Total Power Requirement for Project will be 0.15 MW. Source of Power Supply will be MSEB

8) Rehabilitation & Resettlement (R & R) Plan

Sr. No.	Particulars	Details
1.	Policy to be adopted (central / state) in respect of the project affected persons including home oustees, land oustees & landless labourers (a brief outline to be given)	Not Applicable
2.	Proposed detailed action plan for mangroves replantation (if any)	Not Applicable

9) Project Schedule & Cost Estimates

Sr. No.	Particulars	Details
1.	Likely date of start of construction & likely date of completion (Time schedule for the project to be given)	a. Date of Commencement: 30/01/2008 b. Date of Completion: 31/05/2013
2.	Estimated project cost along with analysis in terms of economic viability of the project	Project cost – Rs. 41,41,64,224.00/-
3.	Share holding of the developer	100%
4.	Share holding of the State Government	0% Not applicable as this is a private project.

10) Analysis of proposal (Final Recommendations)

Sr. No.	Particulars	Details
1.	Environmental cost benefit analysis including financial & social benefits with special emphasis on the benefit to the local people including tribal population, if any, in the area	

11) I. Rapid EIA report including marine & terrestrial component except for construction projects listed under 4 (c), 4(d) of CRZ Notification, 2011 (Not Applicable for building proposal)

Not Applicable. As this is building construction proposal

II. Comprehensive EIA with cumulative studies for projects in the stretches classified as low & medium eroding by MoEF based on scientific studies & in consultation with the State Governments and Union Territory Administration (as per provision of 4.2 (c) of CRZ Notification, 2011)
(Not Applicable for building proposal)

Not Applicable. As this is building construction proposal

III. Disaster Management Report, Risk Assessment Report & Management Plan (As per provision of 4.2 (d) of CRZ Notification, 2011)

INTRODUCTION

The disaster is a stressful event occurring due to man-made or natural calamity affecting the physical, mental and financial life of human being. The disaster can be avoided due to proper planning, or even if occurred due to natural or man-made calamity, they can be faced with due courage during the disaster and post-disaster event by proper disaster management planning.

The disaster can be grouped into 3 phases:

1. Pre disaster or planning or Construction phase: The planning and forecasting of possible disaster during construction phase or pre-construction considering every unforeseen issue can lead to proper pre-disaster planning and management.

2. During the disaster: The pre-planned management strategy, with regular execution practice by mock tests, lead to handle the situation in comfortable manner.

3. Post disaster Management: Even if the disaster happens, the post-disaster management can prevent additional loss of lives, Valuable assets and restoring good mental health. The information received in disaster and post-disaster phase is the database for future disasters as pre-disaster management in future disasters.

BUILDING DISASTERS:

In Residential buildings, the fire is usually limited to the contents of one apartment. Unless there have been modifications to the building or a delay in getting water on the fire, it rarely extends into other units. The smoke, however, can travel through the structure.

Major Causes of Disaster

The major disasters buildings are due to the following reasons:

- Fire
- Flood/ Tornado
- Power failure, Hazardous material incident
- Terrorist Attacks
- Gas Leakages/ Fumes
- Medical Emergency
- Earthquake

Disaster Due to Fire

Tower is provided with a dedicated fire lift for accessibility by firemen in the event of fire. The lifts are provided with back-up power s well. The fire lift lobby is compartmented with fire rated doors. The fire lift lobby is also provided with mechanical ventilation to remain smoke-free in the event of a disaster.

Remain smoke-free in the event of a disaster.

Fire tenders can move around in complex as 30.0 m wide fire tender pathway is provided along the podium.

The lobby design provides for mechanical ventilation and is a step toward managing a disaster.

Disaster due to Earthquake

The site falls in zone-2 and the structure is designed for the same.

Gas Leakages

The design of the apartment allows for excellent cross-ventilation which will also help in case of gas leaks under normal circumstances. In addition to this Gas Leak detectors are provided in each Apartment, which are connected to fire Alarm System of Building.

Medical Emergencies

The independent fire-lift is designed to double as a stretcher lift for use during emergencies. This lift serves all floors.

A. Pre-Disaster/ Construction phase or planning phase:

The management of possible future disaster in planning stages prevents huge losses in future.
The architectural and structural planning of building s per norms for safety, traffic, parking, quality of materials, proposed use of building parts, is a proper management before disaster.

Earthquake Resistance Construction–The Proposed development of Residential building shall conform to the structural Compatibility as per IS: 1893-2002 (Criteria for Earthquake Resistant Design of structure); IS 13920-2003-03 (Criteria for Earthquake Resistant structure); IS 456-2000, IS 875-Prt III 1993. The structures shall be designed using STAAD PRO software with Response Spectrum Analysis (Model analysis) method.

Management of Earthquakes

- Preparation of DM plans, with specific reference to the management of earthquakes.
- Revision of Town planning Bye-laws and adopting of model Bye-laws.
- Wide dissemination of earthquake-resistance Building Codes, the National Building Code 2005, and other safety Codes.
- Training of Trainers in Professional and Technical Institutions.
- Training Professionals like Engineers, Architects and Masons in earthquake resistant construction.

- Launching demonstration projects to disseminate earthquake-resistant techniques.
- Launching public awareness campaign on seismic safety and risk reduction and sensitizing all stakeholders to earthquake mitigation.
- Establishing appropriate mechanisms for compliance review of all construction designs submitted to the Authority.
- Undertaking mandatory technical audits of structural designs of major projects by respective Competent Authorities.
- Developing an inventory of the Existing built environment.
- Assessing the seismic risk and Vulnerability of the existing built environment by carring out structural safety audits of all critical lifeline structures.
- Undertaking seismic strengthening and retrofitting of critical lifeline structures, initially as pilot projects and then extending the exercise to the other structures, in a phased manner.
- Preparation of DM plans and carrying out mock drills for enhancing preparedness.
- Carrying out the vulnerability assessment of earthquake –prone areas and creating an inventory of resources for effective response.
- Strengthening earthquake safety research and development in professional technical institutions.
- Preparing documentation on lessons from previous earthquakes and their wide disseminations.
- Developing an appropriate mechanism for licensing and certification of professionals in earthquake-resistant Construction techniques by collaborating with professional bodies.
- Preparing an action plan for the up-gradation of the capabilities with clear roadmaps and milestones.
- Developing appropriate risk transfer instruments by collaborating with Insurance Companies and Financial Institutions.
- Strengthening the medical preparedness for effective earthquake response, etc.
- Enforcement and monitoring of compliance of earthquake-resistance building codes, Town Planning bye-laws and other safety regulations.

Transportation System

A fast and efficient vertical transport system is incorporated while planning the high-rise buildings. A "Traffic Study" involving accurate

assessment of building users shall be made. Peak demand hours are identified. Elevators shall be located in the Central core of the buildings. All cars (elevators) shall be fitted with overload devices and automatic rescue devices (ARD) which send the cars to nearest floors in case of power failures and even open the doors.

Building Parts

Elevators: When high-rise buildings are designed, it is required that all elevators be built to accommodate a stretcher.

Communication: A backup communication system is required. A stand-by power supply is a good alternative in case of power failure.

Multiple Casualty Incidents: The structures shall have a multiple-casualty incident, which includes scaffold and elevator emergencies, fumes, power failures and fire.

Essential Services

Provisions of proper water supply, sewerage, and drainage facilities is planned for successful and trouble free use of buildings. Water pressure on the upper floors shall be same as that at lower levels.

Sewerage and drainage shall be adequate, efficient and having easy access for repairs and replacement of pipe and joints.

Parking Facilities

The buildings are provided with sufficient space to accommodate residents including visitors parking.

Construction Features

In order to ensure proper quality and safety in construction, the building plan drawings themselves use ready-mixed cement in construction s per quantum of work. Use of super plasticizer and sophisticate formwork is also specified.

Accidents shall be avoided as far as possible and shall be declared intolerable and safety assigned top priority. It is hoped that not a

Single worker loses his life during construction of these high-rise buildings.

With the availability of user-friendly design software packages, sophisticated and versatile equipment and good quality ISI marked materials; the building construction shall be implemented.

The building planning is done using new methodologies of fitting such structures into the social and physical environment. One basic strategy used to account for the variety of high-rise impacts and based on measurement of actual conditions e.g. open space effects, air and water quality.

Building Envelope

The water penetration and air leakage through the building envelope, resulting in structural and other damage, high-energy costs and occupant discomfort.

Inadequate thermal envelope performance and thermal bridging, resulting in occupant discomfort and high energy costs.

Heating, Ventilation and Air Conditioning (HVAC) systems strongly affected by wind pressure and building stack effects, resulting in occupant discomfort and poor indoor air quality.

Changes in land use that impact on storm water flow.

Occupant dissatisfaction with noise levels.

Mitigations

The construction shall be implemented as per plans and specifications.

The material specifications as per plans shall be strictly adhered to. Manufactures' installation requirements shall be always followed, quality control measures shall be taken at priority.

An integrated project team approach shall be taken to avoid any problems and improve building performance by ensuring that construction meets the specified requirements.

Adequate commissioning the testing protocols shall be maintained to avoid late problems in the construction process, or after a building has been occupied, to avoid costly remedial work. Mock-up testing of typical sample assemblies shall be taken as essential tools for ensuring a project will operate as intended.

The operating and maintenance requirements shall be communicated to owners and property managers.

Operation manuals shall be provided and staff needs to be trained in performing regular maintenance to minimize costly remedial and repair work and to ensure efficient functioning of all building systems.

PERSONAL DISASTER MANAGEMENT PLAN TO DISASTER:

Each resident/ occupant shall prepare plan for disaster and disaster shall be managed personally as follows:

Insurance: To cover business/ house properly loss.

Telephone Numbers: A list of important phone numbers in case of a disaster.

- Fire Department
- Police Department
- Ambulance Service
- Hospital
- Security
- Insurance Agent
- Major Suppliers
- Utility Company
- Phone Company
- Local Health Department

Safety of documents:

- Insurance Policies
- List of Assets
- Important phone numbers
- Disaster Plan/ Policies

Water and Power may not be restored for days. Hence, habit to plan without power/ water for about one week may be adopted.

Copies of important papers incl. passport, driver's license, insurance policies, prescription, list of valuables, wills, deeds and financial records shall be kept outside home.

Contact persons outside the building shall be chosen with telephone numbers, names to contact in case of emergency.

Practicing in proper method to turn off gas, electricity and water in the house. To know all possible exit routes for each room, building and the neighborhood.

Emergency kits for home, work and car which include water (20 liters per person), food, medicines, first aid kit, flashlight, AM radio, extra batteries, dust mask, eye protection, whistle, soap and sanitary items, and cash in small bills.

Smoke detector shall be installed in the house, batteries shall be checked periodically.

Emergency telephone numbers to be listed besides each telephone.

Mock drills shall be carried out twice a year.

The address of residence shall be easily visible from the road/ corridor for Emergency Crew.

Managing during Disaster/ Emergency

For protection during disaster, total co-operation to public safety official shall be given.

Inspection of building for damage, using a flashlight, check for gas and water leaks, broken electrical wiring or sewage lines. If there is damage, the utility shall be turned off at the source and utility company shall be contacted immediately.

All corridors shall be kept free for emergency movement of safety workers.

In case of building collapse, staying away from broken windows, furniture shall be adopted.

In case of electricity short circuit/ gas leakages, the premises shall be immediately evacuated.
The elevators shall not be used in case of emergency.

In the event of an earthquake, lying on the floor, under the furniture, covering head and neck shall be adopted.

During the earthquake, staying indoors under cover is better. A person is outdoor; he shall get into an open area away from trees, buildings, walls and power lines. Elevators shall not be used.

After the earthquake, checking for gas and water leaks, broken electrical wiring or sewage lines. If there is damage, turn the utility off at the source and immediately report gas leaks to your utility company.

The Building shall be checked for cracks and damage, including the roof, chimneys and foundations.

Instructions from portable radio shall be followed. The streets shall be kept clear for emergency vehicles.

POST DISASTER MANAGEMENT PLAN:

Evacuation in fire/ Power failure

High-rises have been built assuming that the entire building would not need to be evacuated at once. Instead, during a fire on one floor, occupants evacuate to adjacent floors until it is safe to return.

A full building evacuation during a prolonged power outage, for example, would not necessarily need to be rapid. An explosion, however, might require faster evacuation.

Modifications in Structures

Normally, elevators shall not be used for evacuation of buildings. But, for full building evacuation, the fireproof elevators (so

designed) could safely be used to evacuate high-rise during an emergency.

The staircase shall be designed stairwells wide enough to accommodate both descending occupants and ascending emergency responders. That means wider stairwells. The stairwells shall be marked with consistent signage, be located farther apart without increasing average travel distance and maintain their integrity under foreseeable building-specific or large-scale emergencies.

Evacuation in Terrorist Attacks

Disaster planning in a post-9/11 world means evacuation plans should move beyond fires. Power outages, earthquakes, tornadoes, fire, explosions and terrorist attacks should all be taken into account when evacuation plans are formulated. A proper plan that considers fire and non-fire-related emergencies can ensure that a building disaster does not become a greater tragedy.

Conclusion

The Disaster Management Plan for the building is a joint project of the developer, occupants and government authorities. The moral and social responsibility of the developer and the occupant shall lead to minimize the loss of property and human lives during disaster management.

DISATER MANAGEMENT PLAN

FIRE SUPERSSION SYSTEM

The responsible of extinguishing fires in a city generally lies the city administration which provides water supply and fire brigade services as a part of the city's infrastructural services. The water distribution system normally has fire hydrants placed at intervals so that the fire can draw water from the nearest hydrant.

Merely providing water supply and fire hydrants do not make building safe from fire. Many support services are essential to provided adequate safety to the citizen and individual building occupants.

Some of these are;

- Fire safety in building – design and construction

- Means of egress
- Detection and alarm system
- Suppression system.
- Communications
- Housekeeping & maintenance.

For smaller and modest –sized building, Hydrant system with pumps and connections to reservoirs are provided by plumbers. For tall and complex building, the suppression systems are used. They are complex and required the services of Specialist for design, and contractors for the execution of work.

The spread of fire within a building and possible consequences of the action taken illustrated in Figure.

Causes of Fire

Some major causes of fire in India are;
- Carelessly thrown cigarettes
- Careless use of coal, wood and kerosene stoves.
- Piling of paper, furniture and other combustible material in stores, attics, etc.
- Storage of kerosene, petrol and other combustible liquids in habitable and unsafe areas.
- Unsafe installation and usage of bottled gas cylinders.
- Badly done poor quality and over – loaded electrical systems.
- Excessive use of combustibles in furniture, false ceiling and furnishings etc.

SUPRESSION AGENTS

Water

- Water is the most common extinguishing agent because it has the ideal properties for extinguishing the most common fire, it is available in plenty and very cheep

- When applied to a burning fire, water cools it down to a temperature which will not support combustion. Furthermore, evaporation causes the saturated vapor to displace an equivalent amount of air and deprived the fire of oxygen; aiding extinguishment .It is best applied in droplets as in case sprinklers. Application of water by the force of a jet has excellent something effort which also helps put the fire.

Carbon Dioxide (CO_2)

Carbon Dioxide is an effective extinguishing agent, as it reduced the oxygen content by dilution until support for combustion is not

possible .it has a cooling effect when applied under certain conditions. It is used for dousing electrical fires of other fires which cannot be out with water. Being toxic, central extinguishing system using CO2 have needed to be planned to ensure evacuation of people in time before discharge of the gas in the affected area.

Halogenated Agents (Halons)

Halogenated extinguishing agent are hydrocarbons in which one or more hydrogen atoms have been replace by atoms of Fluorine , Chlorine, bromine or iodine. These substituted results in compound which are both non-inflammable and good extinguishers. Halon been used for electrical and computer-room application.

Halons when discharged into the atmosphere deplete the ozone layer above the atmosphere which shields life on earth from the violet radiation. It is now considered a major Environmental Hazard and is being slowly phased out.

Foam

Fire fighting foam is an aggregate of gas-filled bubbles formed from aqueous solution of specially formulation concentrated liquid foaming agents. Air is the commonly used gas but an inter gas may also be used for certain application. Foams is produced by mixing the foaming agent with water and then aerating and agitating it to form the bubbles. Foams are effective extinguishing agents for oil fires, as they cut out oxygen, besides acting as cooling agent.

Powders

A variety of dry chemical powders are as extinguishing agents for putting fires of complex nature e.g. burning metals, chemical, etc. Most chemical powders act by forming a sticky residue over the fire on burning, which seals it from oxygen, thus helping to extinguish the fire and preventing re-ignition.

Sand

Sand, which is commonly available, is an excellent suppression agent which acts by smothering an incipient Fire. It is particularly useful for electrical and petroleum fires.

TYPES OF FIRE

The origin and natural of all fires has been classified, thereby enabling the use of the appropriate type of suppression agent. The classification is also identified by a symbol printed on fire extinguishers.

d 99

Classification of Fire

Class A: Organic Materials (Wood, Paper, Cloth, Plastic etc.)

Class B: Flammable Liquids (Petrol, Paint, Solvents LPG, Acetylene)

Class C: Flammable Gases (LPG, Acetylene)

Class D: Combustible Metals (Mg, Na, K)

Class E: Electrical Fires and Switch Gear

SUPRESSION SYSTEM

Sand and Water Buckets

In old days there was a practice to keep water and sand buckets at strategic locations. It is still followed in many of the industrials establishments, where an incipient fire cause due to wielding or other open flame operations can be doused by the workers. However, the buckets are quite a nuisance and difficult to maintain in a state of readiness. They have now been replaced by more efficient fire extinguishers.

Fire Extinguishers

a) Fire extinguishers are hand-operated appliances with can be operated by untrained persons to douse the fire. A fire may have different source of fuels. Use of an incorrect type of fire extinguisher of an unknown source of fuel may aggravate the fire and may actually harm the person using it and assist in spreading the fires rather than extinguishing it.

b) Fire extinguishers have printed instruction on them so that even untrained individuals can use them efficiently. Following table gives different type of extinguishers commonly used.

TYPE	METHOD OF OPRATION	CAPACITY (Range)	HORIZONTAL STREAM (M)	CALASSIFICATION OF FIRE
Water (Soda Acid)	Chemically generated	9-150 L	1 to 3	A
Foam	Chemically generated	9-150 L	1.5 to 3	B
CO_2 (gas)	Self Expelling	2-225 Kg	1 to 3	B,C,E
Dry Chemical (Select chemical agent discreetly) Halon 1301	Storage pressure cartridge Stored Pressure	1-140 Kg 1.2- 2 Kg	1.5 to 6 8 to 10	B,C,D,E E
Halon 1311	Stored Pressure	2-5 Kg	8 to 10	E

a. Fire extinguishers are first – aid appliances to be used immediately on sensing a fire. They are the first line of defense against any fire and appropriate use at the right moment can put out a large number of fires. The numbers of fire extinguishers to be provided in a building are governed by Indian standard 2190.

WATER SUPPLIES

For any suppression (manual or automatic) to be successful, a dependable water supply available in adequate quantity and good pressure is a must. Success or failure fire largely on this one single factor.

Direct Supply

In developed countries this requirement is taken for granted and all city water mains are designed to meet the eventually of a fire plus the peak domestic demand at any moment.

Direct city supply is the most dependable and reliable sources of water supply for normal use and fire fighting in a building.

When normal supply and pressure in the mail is plentiful, most risers and the sprinkler system are connected directly to the mains. The same is boosted by on line pumps without excessive storage tank capacity etc.

Shortage of Water

In most Indian metropolises, the water supply situation is quite pathetic. Supply is available for as few as 2-3 hours a day to 4-6 hours. The local municipalities encourage the consumer to collect water in underground tanks and pumps the water to individual overheads tanks. As most water from the city water draw off is excessively higher than the capacity of the city main to supply. These conditions result in further reduction of pressure in the city mains and hence the water does not rise above a floor or two or even less in overloaded water systems. The high demand during short supply hours low water pressure makes the conditions very difficult for fighting systems if they have to depend solely on the city's water distribution system.

Water Shortage

Shortage of water and intermittent in the city water supply system as let to need (as required by most local bye-laws) to have captive water storage tanks exclusively for a fire fighting operation, for a period of at least 90 minutes at a nominal pumping rate of 2850 liters/minute. The captive storage capacity must not be used for any other purpose, works out to 341 Cu m. as per NFPA Code. The storage capacity however needs to be increased for buildings with greater fire loads and risks and those provided with fire sprinkler systems.

Each fires storage tank should have a water connection from the city mains, tube wells of sufficient size to replenish the water quickly during a fire. Fire storage tank have to be captive static storage tank to be used exclusively for fighting operations. All fire and sprinkler pumps will draw water from this tank. To keep the water in the tank fresh it is common to allow the domestic water supply to pass through the fire tank by suitable baffles. Storage available from swimming pools, ornamental pool is considered as supplementary and is not acceptable as a replacement for fire storage tank.

Fire Pumps

To enable the water to reach the top most floors, it is necessary to provide pumping sets connected to the fire tank. (Or city mains when permitted). The pump delivery is connected to the piping system of the hydrant or sprinkler system. Pumps are electrically driven and each system provided with a standby pump. Pumps for fire hydrant systems and sprinkler systems and sprinkler systems are separate and independent of each other, though common pumps having appropriate discharging capacity are used in other parts of the world.

Jockey Pumps

In all pressurized water systems, drop of pressure occurs during normal operating conditions during the day. The drop in pressure occurs due to leakage from pumps, valves, flanges, testing operation system and also due to variation of temperature of water within the pipe. The main fire pumps start on droop of pressure in the system automatically. Constant starting and stopping of the main fire pump unduly strains the pump and its switch gear which is usually of a high capacity. In order to overcome, this problem, a

jockey pump having a very low pumping capacity, usually about 10% of the main pump capacity is installed. It is the jockey pump with its low capacity that makes up the pressure losses in the line and meets low flow rates of hose reels, thus preventing the main pump from starting too often.

Stand by pumps

Dry Risers

a) Dry risers, so called because they contain no water in the pipes, are installed within a building and provided with a landing valve in the staircase lobby. The riser terminates at the street level in the form of a fire bridge connection.

b) The connection enables the fire-bridge to connect the fire-bridge connection either to a street fire-bridge pumper and charge the dry riser with water. The water can then be drawn off t any floor above from the landing valve. Dry risers help to eliminate the long run of hose lines through the building stairways. It also eliminates the danger operation of freezing the standing water in dry riser.

c) Dry risers have not been successful in India largely due to non-understand fire-bridge inlets, which do not always fit the fire-bridge Hose-couplings, pilferage, absence and remoteness, incorrect location of the building fire-bridge connection, in accessible location of city hydrants, and general neglect of the installation.

West Risers

a) Wet Risers are fixed pipe-installations, installed within building and permanently charged with water under pressure from a reliable water supply source.

b) Hydrant station are provided to serve an area of 926 Sq M. it is advisable to place protected areas near each fire escape staircase or lobby so that it can be located easily.

c) Each hydrant station comprises:

- A first-aid hose reel with 20 mm diameter rubber-hose about 30-36 M long with a 6 mm diameter nozzle
- Single or double headed 63 mm diameter landing valve
- An insulated fire axe

d) In tall buildings (15-16 storied and above), the static pressure in the system becomes very high, resulting in leakage in the system. It is desirable to avoid excessive by dividing the building into vertical hydraulic zones by separate risers and provided with pressure reducing valves.

Operation

a) If a fire is not extinguished by hose reels used by the building occupants, the fire fighting operations have to be taken over by trained personnel of the building security staff or the fire bridge. They then draw the water from the single or double headed landing valves provided in the hydrant stations using the 63 mm dia RRL hoses, nozzles etc. As the minimum pressure provided in a wet riser is 3.2 Kg / Sq cm and which is likely to be more at lower floors, the flow from 63 mm diameter outlet with 12 mm dia nozzle will deliver a minimum of 500 lpm. The force of such a jet has a very high reaction and untrained person can be thrown back injured and can cause damage to others while operating the jet.

b) The insulated axe provided in a hydrant station is provided to assist in breaking down doors and provide access in locked areas.

c) Fire extinguishers and hose reels are useful as first-aid-fire-fighting equipment to fire at its inception. Their role diminishes if the fire goes out of control, in which case regular fire-fighting operations are mounted by trained by trained persons. It is important to ensure that the equipment is constantly inspected and maintained in a state of readiness to ensure its efficient operation in times of need.

AUTOMATIC SPRINKLER SYSTEM

a) Automatic sprinklers are devices for spraying water uniformly over fire either to extinguish it entirely or to prevent it from spreading. The system consists of a set of pipes suspended from a ceiling, with sprinkler heads fixed at intervals along the pipe. The sprinkle head is a temperature sensitive device and operates with a fusible link or a glass bulb. In case of fire, the fusible link melts or the bulb bursts t a desired temperature, allowing the water to be sprayed on the fire.

b) Spacing of sprinklers is determined on the basis of hazard classification, exposure and the height at which is installed. Water is applied at a design density measured in mm/min.

standards used by the TAC (Tariff Advisory Committee) of the Insurance Association of India for installing automatic sprinklers given in table.

DESIGN DENSITIES AND SPACING OF SPRINKLERS

	Hazards	Design Density (mm/Min)	Assumed Max area of operation (sq. m)	Max area covered per sprinkler	Maximum distance between sprinklers
1.	Extra Light hazard				
1.1	Non-Industrial occupancy where fire load is low	2.25	84		
	Side Wall sprinklers Other sprinklers			17 21	9.2 4.6
1.2	Areas like kitchen, boiler, attics, basements and storage areas where fire-load is higher.	5.00	84		
1.3	Other sprinklers			9	3.7
2.	Ordinary Hazard				
2.1	Commercial and industrial occupancies handling and processing ordinary combustible materials.	5.00	360		
	a) Side Wall sprinklers b) Other sprinklers			9 12	7.4 4
3.	Extra high hazards and other types of risks require special attention according to TAC/ code requirements.				

a) Spacing of the sprinklers cannot always be strictly followed as per the table. It depends on the structural pattern of the ceiling, depth of the beams, presence of false ceiling and coordination of other services, such as AC ducts, light fixtures, cables etc.

b) The automatic sprinkler system is provided with a main installation valve and a water turbine alarm. When a sprinkler

bursts due to fire, water starts flowing through the pipes and sounds the gong in the alarm valve. The system can be shut off through the installation valve.

c) The system must draw its water from the main static storage tank with a pump to maintain supply and pressure. All systems must be provided with a secondary water supply source which is generally a pressure tank or an independent overhead tank of at least 22,500 L capacity. This tank will supply water for about 30 min before the pump starts.

Operation

a) In case of an outbreak of fire in any area, increased temperature will burst a sprinkler head nearest to the fire and spray water over the area till it extinguishes it. In case the fire spreads adjoining sprinklers will burst containing the fire.

b) When the pressure drops in the system, the sprinkler pump will start and maintain pressure in the lines until the fire is brought under control. In case it fails to start for any reason, water will flow into the pipes from the secondary water-tank or pressure tank.

c) Automatic sprinklers are effective in extinguishing fires at the inception of a fire. They can extinguish a majority of the fire without outside help. It is dangerous to install shut off valves at all times. Valves shut off for some reason and not put into operational condition may endanger a building despite having an efficient sprinklers system.

Deluge system

Deluge systems are a total-flooding system which comes in operation with help of a single heat-sensing sprinkle installed on a setoff pipes having large number of nozzles which spray water simultaneously to flood the area or equipment. Deluge systems are commonly used for protection of electrical transformers and other high hazard areas where flooding not only extinguishes the fire but lower the temperature of combustion and provides cooling effect. The main deluge valve is located outside the risk area and is specially designed for quick opening and high flow. The nozzles are designed to derive air from the atmosphere to provide aerated spray for more effective application.

Water supply and pressure requirements vary according to the requirements of each application. Generally the system can be connected to the building's fire or sprinklers system.

CO2 and Halon System

Both CO2 and Halon System are extinguishing agents are extremely effective in putting out fires in electrical switch rooms, control rooms, storage areas in libraries , archives, museums etc. where direct application of water and other agents may damage the valuable things and equipments.

Application

Local Application: the agents can be used locally by means of hand-held extinguishers or cylinders with local piping detection and discharge systems for confined areas.

Total flooding: For saving important equipment and rooms from fire, total flooding in recommended concentration is an ideal solution. It has a dramatic effect of putting out fire. Besides, the equipment does not get damaged as in case of water.

Toxicity

CO_2 is mildly toxic but can produce unconsciousness and death when present in the fighting applications. A person may become helpless if the concentration is greater than 9-10%.

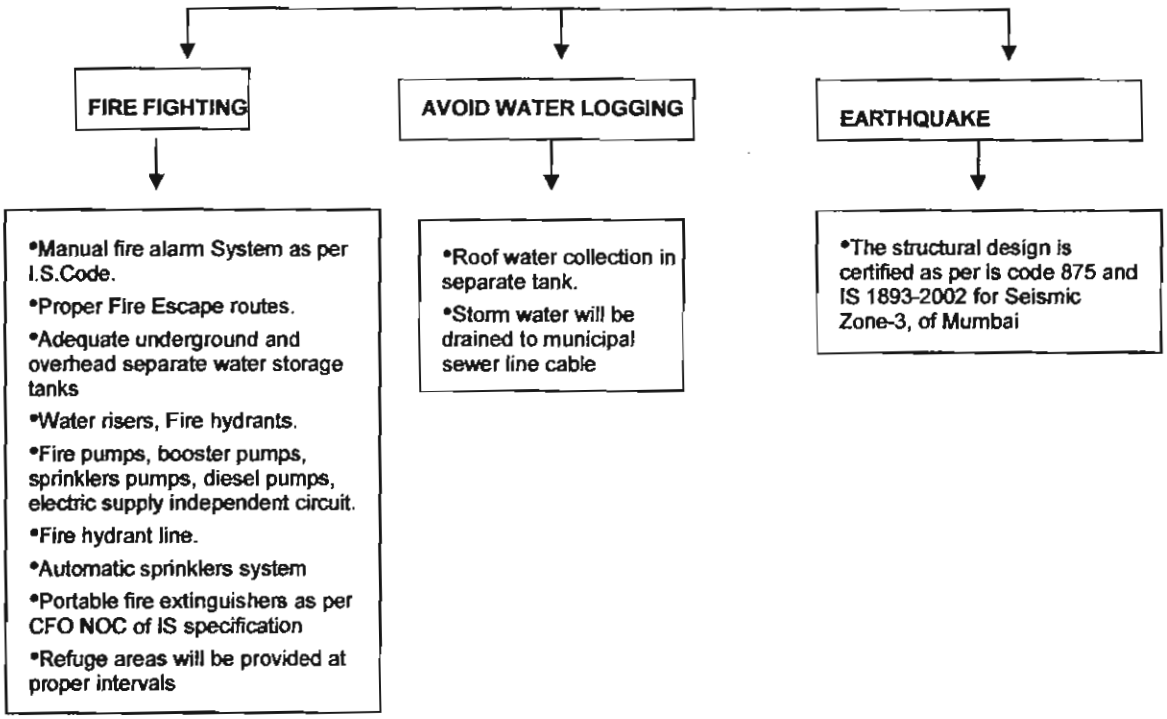
Halons are comparatively less toxic. A concentration of 7% by volume in Halon 1301 and 2-3 % in Halon 1211 has little effect on a person. People may suffer from dizziness and mild anesthesia at higher concentrations. Halons are, however, environmentally hazardous s their presence in the atmosphere affects the ozone layer above the atmosphere. Its use is being progressively eliminated.

Important Precautions

Following care is essential where gas based systems are involved.

a) Pre-alarm to ensure evacuation of all persons inside the protected area.
b) Automatic shutting off of all doors, windows and openings to seal the whole area.
c) Automatic shut off of incoming fresh air any exhaust system.
d) Prevention of premature venting of the extinguishing agents.

DISASTER MANAGEMENT PLAN



Building telephone numbers for life-threatening emergencies:

1) Fire Brigade : (022) 27572111

2) Ambulance: Manak Health Care hospital (022) 27725917,
   Sterling Wockhardt Hospital: (022) 61612340

3) Hospital: D Y Patil Hospital: (022) 39215999,
   Sterling Wockhardt Hospital: (022) 61612340

IV. Photographs & Google images of the site indicating existing status & location of the site

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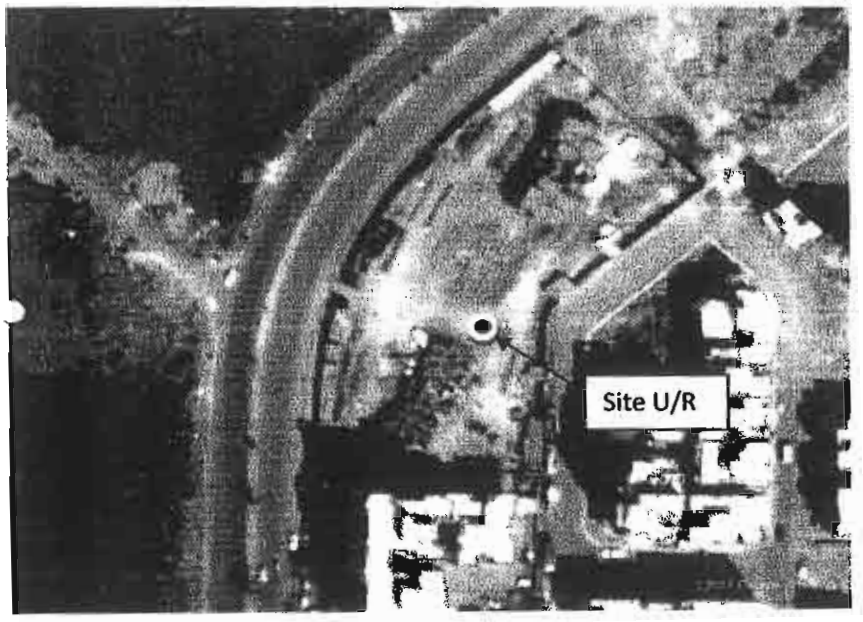
To see all the details that are visible on the screen, use the Print link next to the map.



V. CRZ map indicating HTL and LTL and CRZ classification by one of the authorized agencies by MoEF in 1:4000 scales and project layout superimposed on the above map of CZMP (As per provision 4.2(e) and (f) of CRZ Notification, 2011)

Not Applicable

VI. The CRZ Map normally covering 7 km radius around the project (for ports, harbours, jetties, infrastructure projects) (as per provision 4.2 (g) of CRZ Notification, 2011)

Not Applicable

VII. NOC from MPCB for projects involving significant discharge of effluents, solid wastes, sewage and the like (as per provision 4.2 (i)

Not Applicable

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13) Attached following No Objection Certificates

Sr. No.	Particulars	Observation
1.	Heritage Conservation	Not Applicable
2.	State Ground Water Board	Not Applicable
3.	Maharashtra Pollution Control Board	Not Applicable
4.	High Court	Not Applicable
5.	Maritime Board	Not Applicable
6.	Port Trust	Not Applicable
7.	Civil Aviation	Not Applicable
8.	High Rise Committee	Not Applicable

Applicable for SRA / Cessed / Dilapidated / Unsafe Building

14)	Undertaking of the project proponent for the development through slum Rehabilitation Scheme along with the state Government to ensure that all legally regularized tenants are provided houses in situ or as per norms laid down by the State Government in this regard (as per the provision of B(v)(2)(iii) of CRZ Notification, 2011)	NA
15)	Undertaking of the project proponent to agree to be covered under the Right to Information Act.2005 (as per the provision B(v)(c)(d)(v)of CRZ Notification 2011)	NA
16)	Public consultation Report (as per provision B(v)(4)of CRZ Notification, 2011)	NA
17)	Stake of the state Govt. or its paraetalal entities (which should not be less that 51%)in the project (as per provision B(v)(1)(ii)(b)(2)(i)of CRZ Notification 2011	NA
18)	Any other information relevant to the proposal	

Declaration

I hereby declare that the information mentioned above is true to the best of my knowledge. I fully understand that any information furnished above if proved incorrect or false will render me liable for any penal action or other consequences as may be prescribed in law or otherwise warranted. Further I hereby stat that i will also submit half yearly compliance report in soft & hard format, on 1st June & 31st December of each calendar year to CZMA as per rule 4.2(v) of the CRZ Notification 2011 issued under the environment Protection Act, 1986. I will pay requisite fees to MCZMA for processing the application places before it.

For Shivshankar Builders & Developers

Partner

Signature of Applicant

Date: