



**NAVI MUMBAI MUNICIPAL CORPORATION
FIRE HAZARDS RESPONSE AND MITIGATION PLAN**

TABLE OF CONTENTS

EXECUTIVE SUMMARY	4
1. MILLENIUM CITY	6
2. General Information about Navi Mumbai:.....	7
2.1.1 Geography:.....	7
2.1.2 Location and Connectivity:.....	7
2.1.3 Geology	8
2.1.4 Topography.....	8
2.1.5 Climate	8
2.1.6 Temperature	8
2.1.7 Rainfall	8
2.1.8 Humidity.....	9
2.1.9 Wind.....	9
2.1.10 Soil.....	9
3. FIRE HAZARDS RESPONSE AND MITIGATION PLAN	10
4. PERSONAL INFORMATION OF EACH EMPLOYEE OF THE FIRE BRIGADE.....	29
5. GAP ANALYSIS for FIRE STATIONS AS PER S.F.A.C.	51
6. GAP ANALYSIS for PUMPING UNITS AS PER S.F.A.C.	51
ANNEXURE I NODES OF NMMC	53
CBD BELAPUR.....	56
NERUL.....	58
SANPADA.....	60
VASHI.....	62

KOPAR-KHAIRANE	64
GHANSOLI	66
AIROLI.....	68
DIGHA.....	70
NODE WISE POPULATION SUMMARY AT GLANCE.....	72
ANNEXURE II POPULATION GROWTH OF NAVI MUMBAI.....	73
2.2 Demography.....	73
2.3 Population Density.....	75
2.4 Population projections.....	75
ANNEXURE III HOSPITAL.....	77
ANNEXURE IV EDUCATIONAL INSTITUTES	78
ANNEXURE V DIALAPIDATED BUILDINGS.....	80
ANNEXURE VI JUGGI ZOPADIS.....	80
ANNEXURE VII LOW LINE AREAS	80
ANNEXURE VIII EMERGENCY COMMUNICATION AND COORDINATION.....	81
ANNEXURE IX SOP FOR ATTENDING EMERGENCY.....	82

EXECUTIVE SUMMARY

The NMMC came into existence on 1st Jan.1992 with its jurisdiction covering 29 villages out of Navi Mumbai project area and another 15 villages from Kalyan complex area (Total of 44 villages from Thane Taluka) with a combined area of 162.5 sq. Km. This area is known as NMMC Area. Subsequently the developed nodes within the jurisdiction of NMMC were transferred by CIDCO to NMMC. The NMMC nodes are referred as Airoli, Ghansoli, Kopar Khairane, Vashi, Sanpada, Nerul, CBD Belapur and Digha.

The Fire Hazards and Response Mitigation Plan prepared for the area under jurisdiction of the Navi Mumbai Municipal Corporation (NMMC) is founded on the Performa forwarded by the Director Fire Service, Maharashtra State.

The Fire Hazard and Response Mitigation Plan as laid out hereafter takes into account the existing strength of the Fire Brigade, the equipment and infrastructure currently deployed and established to respond to fire and allied emergencies handled by the Fire Brigade in its area of jurisdiction.

Further the Guidelines on scaling, type of equipment and re-vamping of Fire Services issued by the National Disaster Management Authority (NDMA) under Section 6 of the DM Act 2005 for effective, efficient and comprehensive management of Fire incidents and standardization of the Fire services in the country have been kept in mind when preparing the Fire Hazard and Response Mitigation Plan for NMMC.

By using reliable parameters to estimate future growth of population and thereafter by using Gap Analysis to ascertain the "chasm" or "Gap", the future requirements in terms of manpower, equipment and infrastructure has been identified and reported. This meets the requirement of the 13th Planning commission relating to augmentation and preparedness of the Fire Brigade in the overall Disaster Management Plan of an area.

In its expressive form, the report states clearly the areas where the intervention of the State Planning Authorities is necessary for effective response to emergencies.

Assistance to this report would be appropriate in matters relating to the overall preparedness of the Fire Brigade, the present Fire Officers understanding of present and future challenges and their foresight to seek suitable infusion in terms of cadre, equipment and infrastructure.

The Hazard and Mitigation Plan has been prepared keeping the future population growth rate and constructional growth, to accommodate this population. The separate study over the Population Growth (Annexure II) has highlighted the need to enhance the Fire and Emergency Services.

Bhaskar Wankhede
Commissioner
Navi Mumbai Municipal Corporation

1. MILLENIUM CITY

Navi Mumbai is world's largest planned city with a horizon of 344 sq kms. It includes an area of 95 villages in it, having a coastal stretch of 34.2 kms along Thane and Panvel creeks.

To avoid the haphazard spill over of Mumbai, Plan for Mumbai Metropolitan Region (MMRP) was prepared under the provision of Maharashtra Regional and Town Planning act 1966, which was sanctioned by Govt in 1973. One of the most important propositions of the sanctioned MMRP was to develop a new metro city in Trans Thane creek and Trans harbor area extending inland up to Panvel and Uran. The new metro city was subsequently named as New Bombay (Now Navi Mumbai).

Navi Mumbai comprises of the strip of marshy land lying between village Dighe in Thane district and Kalundre village of Raigad district parallel to the then Greater Bombay. The City & Industrial Development Corporation of Maharashtra Ltd (CIDCO), a Company fully owned by the state Government, was declared as New Town Development Authority under the Provisions of MRTTP Act, 1966, to plan and develop the city of Navi Mumbai. For this purpose, the State Govt. notified all the privately owned lands within the notified area of Navi-Mumbai for acquisition under the L.A. Act. The land so acquired by State Government was vested in CIDCO for the development and disposal purpose. CIDCO carved out 08 nodes (small townships) of the land with a view to facilitate comprehensive development and to give it an identity of new city.

These nodes are named Airoli, Ghansoli, Kopar Khairane, Vashi, Sanpada, Nerul, CBD Belapur, Digha. As the city grew in size, a need was felt to create an urban local body to take care of day to day maintenance of the city as well as other functions such as public health, primary education etc. which was not the mandate of CIDCO.

The Navi Mumbai Municipal Corporation (NMMC) accordingly came into existence on 1st Jan. 1992 with its jurisdiction covering 29 villages out of Navi Mumbai project area and another 15 villages from Kalyan complex area (Total of 44 villages from Thane Taluka) with a combined area of 162.5 sq.Km. This area is known as NMMC Area. Subsequently the developed nodes within the jurisdiction of NMMC were transferred by CIDCO to NMMC for maintenance purpose although CIDCO continues to own and develop vacant land within these nodes as the development authority. All the capital and revenue expenditure in these nodes is borne by NMMC.

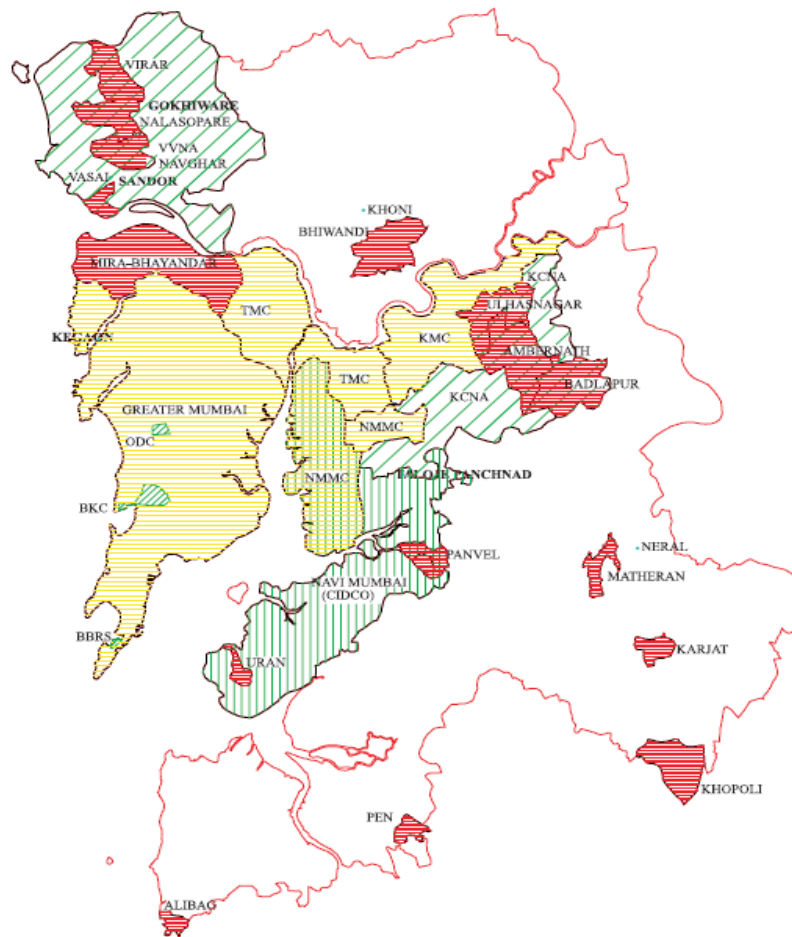
2. General Information about Navi Mumbai:

2.1.1 Geography:

NMMC area is spread in district of Thane in Maharashtra. It is located in latitudes of 20° N 73° E. It consists of hilly areas and certain parts under wetlands.

2.1.2 Location and Connectivity:

NMMC area lies on the eastern main land of Thane creek. It starts from Digha, Airoli in the north and Nerul Belapur in the south. NMMC area is well connected to Greater Mumbai and other cities like Thane and Pune..



Map-1: Location map of
NMMC area

Apart from the decades old Thane creek bridge connecting Mankhurd with Vashi, there are two road bridges and one rail link and third connection via Sewri is proposed by MSRDC. Seven railway stations on Mankhurd Belapur line at different nodes provide full connectivity to NMMC area up to Kurla. Five railway stations on Thane Sanpada line also connect Kalyan via Kalwa. A new international airport is also planned in Navi Mumbai region

2.1.3 Geology

The rock formation in the region is derived mainly from Deccan Basalt and also from granites, gneisses and laterite. The gently sloping coastal low lands are observed in patches and are covered with moderately shallow to deep soils, mostly lateritic in nature, sometimes oxidized to yellow murrum.

2.1.4 Topography

To part of Western Konkan coast is a narrow coastal strip along the western part of Sahyadris. It is bound on the eastern side by hillocks of height of 50-200 mt. and on the west side by Thane creek.

2.1.5 Climate

This area has sub-tropical monsoonal climate of humid-per-humid to semi-arid and sub humid type. Overall climate is equable with high rainfall days and very few days of extreme temperatures.

2.1.6 Temperature

The mean annual temperature ranges from 25°C to 28°C. The mean maximum temperature of the hottest month in this area varies from 30°C - 33°C in April-May while mean minimum temperature of coldest month varies from 16°C to 20°C. Extremes of temperatures, like 38°C- 39°C in summer and 11°C-14°C in winter, may be experienced for a day or two in respective season.

2.1.7 Rainfall

The rainy season is mostly confined to south-west monsoon with 80 percent of the rainfall being received during June to October (60-70 days). This area, on an average, receives 2500 to 3500 mm rainfall.

2.1.8 Humidity

The area has marine humid-per humid climate with more humidity and less daily variations. Relative humidity varies from 41 to 97%. Driest days being in winter and wettest ones are experienced in July.

2.1.9 Wind

Features such a presence of large water body (the creek), presence of hill ridges etc. influence the local wind patterns to some extent. No significant micro-climatic variation is noticeable in the region.

2.1.10 Soil

The soil of this area is highly saline in the vicinity of creeks and non-saline at other places. They are calcareous, neutral to alkaline in reaction (pH 7.5 to 8.5), clayey, with high amount of bases and have high water holding capacity (200-250 mm/m). The soils located on moderately sloping residual hills are lateritic in nature and show intensively leached surfaces. They are loamy and slight to moderately acidic (pH 5-6.5) with moderate base status (< 75%)

NAVI MUMBAI MUNICIPAL CORPORATION

3. FIRE HAZARDS RESPONSE AND MITIGATION PLAN

1.	Name of City :	Navi Mumbai Municipal Corporation, Navi Mumbai, Dist Thane, Maharashtra.
2.	Population of City as per 2001 Census :	7,03,947 as per Census 2001. As per the Census 2010 the population rise of almost 87.5 % is expected - 13,19,900. Population growth: The decadal population growth rate in NMMC area is 87.5% as per the Census 2001.(Annexure I)
3.	Area of City (In Sq.Kms.) :	162.5 sq.km.
4.	Population Density of City :	8122 per persons per square km.(As per calculation of Census 2010-11)
5.	Name of the Authority maintaining	Navi Mumbai Municipal Corporation, First Floor, Belapur Bhavan. CBD-Belapur, Navi Mumbai 400 614.
6.	Are you maintaining Fire & Emergency Service as per Govt. of India Guidelines.	YES
a.	One fire engine for 50,000 population up to 3,00,000 population. From 3,00,000 upwards additional Fire Engine per lack of population or Fraction thereof	Total 16 Fire Engines. The Required Fire Stations and Fire Tenders as per the S.F.A.C. norms to cover any potential hazard are calculated as per the Gap Analysis.
b.	One fire station for 10 sq. Km Urban area	Existing 03 Fire Stations + 01 Proposed. Required additional 04 Fire Stations as per Annexure Nodes of NMMC

		Proposed Fire Stations as 1.Digha,2.Ghansoli, 3.Koparkhairne. 4.Nerul Phase II
c.	One fire station for 50 sq. Km Rural area	
d.	Response time maximum 5 minutes in Urban Area and 20 minutes in Rural area	Response time 5 TO 7 Min.
7.	Administrative Head of Fire & Emergency Service	
a.	Name	Mr. Jagannath N. Sinnarkar
b.	Designation	Dy. Municipal Commissioner
c.	Address with Pin code	Belapur Bhawan,First Floor,CBD Belapur,Navi Mumbai 400 614.
d.	Telephone No. (with STD Code)	022-27577070 / 27575700
e.	Fax No	022-27573785
f.	Mobile No	9821599899
g.	E-Mail	
h.	Website	www.nmmconline.co.in
8.	Head of Fire & Emergency Service	
a.	Name	Mr.Vijay S. Rane
b.	Designation	Dy. C.F.O (I/C)
c.	Address with Pin code	Vashi Fire Station,Near Vishnudas Bhawe Natyagriha,Sect 16-A,Vashi,Navi Mumbai 400 703.
d.	Telephone No. (with STD Code)	022-27660101
e.	Fax No. Mobile No.	9987265624
f.	E-Mail	vijayrane71@yahoo.com
g.	Name of Central Fire & Emergency Station, Fire & Emergency Service Head Quarters Address with Pin code	Vashi Fire Station,Near Vishnudas Bhawe Natyagrha, - Sector-16A,Vashi,Navi Mumbai.400703
h.	Telephone No. (with STD Code)	022-27660101

9.	Do you conduct any fire safety training program or awareness program for the public.	Yes. Extensive Fire and Life Safety Awareness Training programs are conducted during Fire Service Week.
10.	Do you carry out evacuation drills/ mock drills in vital installations/ industrial plants/ Govt. Buildings	Yes. Mock Evacuation and Fire Fighting drills are conducted in Govt. organization like RBI,SBI etc. The industrial, Chemical Engineering plants of TTC Industrial area etc. are the part of MARG(Mutual Aid Response Group) and regular Mock Drills are conducted in consultation with NMMC.
Risk Assessment, Incident Prevention & Mitigation of City : (Risk Evaluation and Control)		
11.	Is the Fire Approval is Mandatory for construction of all types of buildings	Yes. The Plan is first scrutinized and approved from the Fire and Life safety Risk Point, then Commencement Certificate is issued by Town Planning Office. Final Approval is given subject to the Compliance of the requirement.
12.	Is the Fire Approvals are as per the Provisions contained in National Building Code 2005.	Yes.
13.	Is the central data of all fire approval is maintained in Head Quarters	Yes. As per the existing practice the Central Data is maintained as follows 03 Years 05 Years 10 Years
14.	Please provide the copy of Development Control Rules of the city.	DCR for NMMC -1994(as published in Apr 2006) Is attached.

(Space left intentionally blank)

15. Please Provide the details of Potential Fire Risk in the City

		Nos.	
		Residential	Non-residential
1.	Buildings		
	Upto 15 Meters	1090	
	15 to upto 24 Meters	863	168
	Above 24 to upto 36 Meters	105	
	Above 36 to upto 45 Meters	87	
	Above 45 to upto 60 Meters	30	
	Above 60 to upto 75 Meters	14	
	Above 75 to upto 100 Meters	11	
	Above 100 to upto 150 Meters	--	
	Above 150 Meters above.	--	--
2.	Industrial Area / Chemical Zone		01, M.I.D.C
3.	Cinema Halls/ Malls/ Drama Theatres		26
4.	Public Gathering Places		67
5.	Hazards storage		66 (Most of the storage areas could be observed into the MIDC)
6.	Pilgrims Area (Floating Population)		05 (Safety and Security of the floating population during festive season is under Police Services)
7.	Exhibition/ Public Function Grounds where permission for erecting pedals for circus or any other religious / social functions are granted.		05
8.	Other (Please give details)		--

Note: All above buildings should be sub-classified on the basis of following classification as per Part 4 of NBC 2005:

A.	Residential Buildings	
a.	Lodging or Rooming Houses	
b.	One or Two Family private Dwelling	1201
c.	Dormitories	
d.	Apartment Houses (Flat)	
e.	Hotels	Appr 600
f.	Hotels (Starred)	Appr.15

B	Educational Buildings	
a.	School upto Senior Secondary Level	358 (Annexure IV)
b.	All other Training Institutes (Medical, Engineering, Colleges)	34 (Annexure IV)
C	Institutional Buildings	
a.	Hospitals & Sanatoria	
b.	Custodial Institutions	--
c.	Penal & Mental Institutions	--
d.	Group D Assembly Buildings	97
e.	Group E Business Buildings	21
f.	Group F Mercantile Buildings	--
g.	Group G Industrial Buildings	--
h.	Group H Storage Buildings	66 (Low Hazard Storage in APMC, Turbhe area)
i.	Group J Hazardous Buildings	
16	Road Network	
a.	Any major National Highway passing though City	Mumbai – Pune Highway which converts into Express Way after Kalamboli.
b.	Any State Highway passing though City	Sion- Panvel, Thane- Turbhe.
c.	Any Tunnels in the City	--
d.	Major Bridges in the City	1.Vashi Creek Bridge (Old & New), 2.Vashi Railway Bridge 3.Vashi Junction Bridge, 4. Nerul Junction Bridge, 5. CBD Belapur Bridge, over Sion Panvel Highway, 6. Turbhe Naka Bridge (Connecting Sion – Panvel and Thane Belapur Roads), 7.Mahape Bridge, 8.Khairane Bridge, 9.Ghansoli Bridge, 10.Airoli Bridge over Thane Belapur Highway.
e.	Accident prone patches	Major Highways, State High ways, Palm Beach Road.
f.	Roads in Hilly Areas or Hilly/Mountain Area in the City or near City	Mahape – Shil Phata Road
17.	Railway Network	Harbour Rail Network connecting Thane, Mumbai and Panvel
a.	Mail/Express Train main stations	Nil
b.	Local Train stations	Total-11Nos Belapur, Seawoods, Nerul, Juinagar, Sanpada & Vashi ,Turbhe, Koparkhairne, Ghansoli] Rabale & Airoli.
c.	Metro train stations	Nil

d.	Underground Metro stations	Nil
e.	Sky Bus	Nil
f.	Mono Rail	Nil
18.	Airport	Proposed International Airport at Ulve node
a.	Domestic	
b.	International	
c.	Cargo	
d.	Helipad	Dhirubhai Ambani Knowledge City private Helipad to cater internal Management – 02 Nos.
e.	Air force Airbase	Nil
19.	Sea / River Port	Nil
a.	Passenger Jetties	02 Nos. at Sagar Vihar, CBD Belapur. Hovercraft sea transportation service from Vashi to Nariman Point is proposed.(At present inactive)
b.	Container Jetties	Nil
c.	Bulk Material Handling Jetties	Nil
d.	Petroleum Products Handling Jetties	Nil
e.	Chemical & Hazardous Goods Handling Jetties	Nil
f.	Fishing Jetties	Total – 08 Nos Divala ,Karave, Sarsole, Vashi, Koparkhirne, Ghanasoli, Dive & Airoli
g.	Ship Breaking Areas	Nil
h.	Ship Building Docks	Nil
i.	Naval Base	Nil
20.	Vital Installations in the City	
a.	Secretariat	Nil
b.	Legislation Assembly	Nil
c.	Bank Headquarters	Reserve Bank, State Bank Of India
d.	HQ's of major Govt. & Semi Govt. Organizations	C.G.O Complex, R.B.I,S.B.I,CIDCO ,Kokan Bhavan, Raigad Bhavan, Kokan Railway, APMC Market, Navi Mumbai Police Commissioner Office, Navi Mumbai Municipal Corporation, International InfoTech park.
e.	Atomic Power Stations	Nil
f.	Chemical Factories	Located at TTC Industrial Area of MIDC.
g.	Fertilizer Plants	Nil
h.	Major Hazardous Units	Total -14 Nos. in MIDC area
i.	Cross Country Pipelines	Service –Water Line ,Shil- Mahape, Belapur-Digha.
j.	Petroleum Oil Companies like Refinery, Bulk Storages Depot-	IOC,HPCL,IBP
k.	Petroleum & Flammable Gas, LPG filling Stations	Yes.

l.	Domestic Gas Pipe Network	Mahanagar Gas Ltd. Has laid down the pipelines in some part of the area for Domestic PNG supply.
m.	Cylinder Gas Storage-outlets	Yes.Approx. 12 LPG storage and distribution Agencies of different service providers are located into the Jurisdiction.
21.	Temporary Structures such as Exhibition Halls, Circus tent, Pedals erected for religious activities	Yes. Permission for Temporary erection of Pandals, Stage, Circus Tents, Exhibition centers etc.is given by concern authority for limited period.
22.	Dilapidated & Unsafe Buildings in the City	Yes. List of such buildings is attached Annexure IV
24.	Unorganized Houses like Juggi Zopadi & Slum Area	Yes. List of such areas is attached Annexure V
25.	Geological Hazards Associated with City	
a.	Earthquake	Yes ,Seismic Zone IV
b.	Tsunami	Yes.
c.	Landslide, Mudslide, Subsidence	Yes.
d.	Glacier, Iceberg	Yes.
26.	Meteorological Hazards Associated with City	
a.	Flood, Flash Flood, Tidal Surge	Yes
b.	Drought	NO
c.	Fire (Forest, range, urban, wild land)	Yes
d.	Snow, Ice, Hail, Avalanche	NO
e.	Windstorm, tropical, cyclone, hurricane, tornado, water spout, dust/ sand storm.	Yes
f.	Extreme temperatures (Heat, cold)	40 C TO
g.	Lightning strikes	Yes
h.	Famine	NO
i.	Geomagnetic storm	NO
27.	Biological Hazards Associated With City	Health Department of NMMC has a regular check and spreads awareness about such hazards. City is prone to Bird Flu, Swine Flu, Malaria, Dengue, Lepto, etc.
a.	Emerging diseases that impact human or animal (Swine-flu, Malaria, Birds flu, Plague, Smallpox , Anthrax, Foot & Mouth Disease.	City is prone to such diseases.
b.	Animal or Insect infestation or damage.	NO
28.	Human Caused events such as the following	
a.	Accidental	Yes
i.	Hazardous material (explosive,	As the major Highway and State Road network

	flammable liquid, flammable gas, flammable solid, oxidizers, poison, radiological, corrosive) spill or release.	passes through the City limits, it is vulnerable to such Hazards by virtue of the Tanker, Truck such carrier vehicle accidents.
li.	Explosion / fire	Yes.
lii.	Transportation accident	Yes.
iv.	Building / structure collapse	Yes.
v.	Energy / power/ / utility failure	Power failures interrupts the daily activities.
vi.	Fuel/ resource shortage	About 25 odd Petrol Pumps cater to the need of such fuel.
vii.	Air/ water pollution, contamination	Air Pollution caused by the Vehicle exhaust is observed.
viii.	Water control structure/ dam/ lever failure	Yes.
ix.	Financial issues (economical depression, inflation, financial system collapse)	Yes.
x.	Communication system interruptions	Yes.
xi.	Misinformation	Yes.
b.	Intentional	
i.	Terrorism (explosive, chemical, biological, radiological, nuclear, cyber)	Yes.
li.	Sabotage	--
iii.	Civil disturbance, public unrest, mass hysteria, riot	Yes.
iv.	Enemy attack, war	Yes.
v.	Insurrection	
vi.	Strike or labour dispute	Yes.
vii.	Disinformation	Yes.
viii.	Criminal activity (vandalism, arson, theft, fraud, embezzlement , data theft)	Yes.
ix.	Electromagnetic pulse	Yes.
x.	Physical or information security breach	Yes.
xi.	Workplace violence	Yes.
Xii.	Product defect or contamination	Yes.
Xiii.	Harassment	Yes.
xiv.	Discrimination	
29.	Technological Caused events that can be unrelated to natural or human caused events, such as the following :	
a.	Central computer, mainframe, software, or application (internal / external)	Yes.
b.	Ancillary support equipment	Yes.

c.	Telecommunications	Yes.
d.	Energy / power / utility	Yes.

30. Analysis of Fire & Rescue Calls to Draw a Probability of Hazards.

Sr. No.	Particulars	2005	2006	2007	2008	2009	2010 Jun.
1	Total No. of Fire & Rescue Calls						
	a) No. of Fire Calls	295	432	433	511	429	286
	b) No. Rescue Calls	611	771	788	726	975	571
	c) No. of Gas Leaks	20	27	35	42	49	
	d) Building Collapse						
	e) Hazards Material calls						
	f) Animal Rescue Calls	60	85	95	70	75	
	g) Other calls						
2.	No. of Lives Saved	34	71	70	83	80	
	No. of Lives Lost	22	46	49	19	24	
	No. of Injured	34	71	70	83	80	
3.	Property Saved (Rs. In Lakhs)	306.94	2929.16	151.3	693	859	
	Property Lost (Rs. In Lakhs)	167.99	1701.32	38.95	478	552	

31. Analysis of Incidents :

Sr. No.	Particulars	2005	2006	2007	2008	2009	2010 Jul.
A	Nos. of Fire/Rescue Calls received from 7000 hrs to 1900	551	593	946	838	972	
B	Nos. of Fire/Rescue Calls received from 1900 hrs to 7000	435	508	405	511	556	

C	Planning, Resource Management & Incident Management : (Mutual Aid/ Assistance, Emergency Response and Operations, Developing and Implementing emergency response plan & procedures.)	
32	Please provide the copy of Disaster Management Plan of the city.	Yes. Volume 1&2 (Marathi)
33	Do you have any Mutual Aid with any Central or other State Govt. Authority for conducting fire & rescue operations Please provide details	Aid -Civil Defense, Mutual Aid Group, Home, Guard ,RAF,MBCP TBIA,MIDC,MSEB,MTNL,RTO CIDCO,BEST, Railway
34	Is on site and off site disaster managements Plan is in place for all vital installations, buildings and industrial plants. And is in sync with the district disaster management plan.	Yes.

(Space Left Intentionally blank)

35. EMERGENCY RESPONSE CENTRES

Sr. No.	Name of Fire Station	Type of Construction of Fire Station i.e. RCC/Metal Shade / Temporary Shade	Address	Telephone No.	Fax No.
1	Vashi Fire Station	RCC	Vashi Fire Station, Sector e-16A, Vashi, Navi Mumbai	022-27660101, 102	
2	CBD Belapur Fire Station	RCC	CBD Belapur Fire Station, Sectors-1A, CBD Belapur, Navi Mumbai	CBD - 022-27572111, 101	
3	Airoli Fire Station	RCC	Airoli Fire Station, Sectors-1A, Airoli, Navi Mumbai	Airoli - 022-27796600	

(Space Left Intentionally blank)

36. Details of Fire and Rescue Appliances made available in Fire Stations :

Sr. No.	Name of Fire Station	Number of Water Tenders	Number of Rescue Tenders	Number of Ladders i.e. TTL/ ALP's	Other fire or rescue Appliances
1	Vashi Fire Station	03	01	03	
2	CBD Belapur Fire Station	03	--	--	Water Tanker 1
3	Airoli Fire Station	03	01	--	Water Tanker 1

37. Summary of Fire and Emergency Service :-

Sr. No.	Type of Vehicles	Existing Nos.	Future Additional Requirement Plan
1.	Number of Fire Stations	03	04
2.	Water Tenders	09	07
3.	Rescue Tenders	02	01
4.	Advance Emergency Rescue Tenders	--	--
5.	Flood & Rescue Tenders	--	01
6.	Hazmat Vans	--	01
7.	Turn Table Ladders	--	--
8.	Hydraulic Platforms	03	--
9.	DCP Tenders	--	Multipurpose -1 No.
10.	Foam Tenders	--	02
11.	Smoke Blowers	--	02
12.	Control Post Vans	--	01

13.	Water Tankers	02	Water Brouser - 02 Nos
14.	Ambulances	04	02
15.	Cars	--	01
16.	Jeeps	04	02
17.	High Pressure Portable Pumps	02	02
18.	Portable Pumps	14	03
19.	Breathing Apparatus Sets	20	20
20.	Flood rescue boats	06	02 Nos. (Provided by State Govt.)
21.	Life jackets	90	--
22.	Search & Rescue Gears, Including Lukas, Nike gears, Pneumatic Lifting Bags, Search Cameras, Gas Detectors, Thermal Imaging Cameras etc	--	08 Units (01 unit per station)

38.	Do you have Staff Quarters in Fire Station premises? Please provide numbers in each fire station	Yes. Officer & Staff quarters CBD Belapur Fire Station -32 Nos, Airoli Fire Station - 32 Nos Vashi Fire Station- 04 Officer Quarters. Staff Quarters building vacated as declared dangerous to live.
39.	Do you have Parade Ground in Fire Station compound?	Yes .All the Fire Station has Parade ground.
40.	Do you have Drill Tower in Fire Station compound?	01 at Airoli Fire Station. Dilapidated Condition.
41.	Is there Water Tank in Fire Station compound? If so please give its capacity	Yes Vashi Fire Station – 50,000 Lit Airoli Fire Station – 50,000 Lit CBD Fire Station – 1,00,000 Lit
42.	Do you have facilities to arrange training classes in Fire Station premises? Please give its capacity	No.

43. Details of Officers & Staff attached to Fire & Emergency Service						
Sr. No.	Designation	Pay Band	Grade Pay (GRP)	No. of Posts		
				Sanctioned	Filled	Vacant
1.	Chief Fire Officer	9300-34800	4600	1	--	1
2.	Dy. Chief Fire Officer	9300-34800	4400	1	1*	--
3.	Divisional Fire Officer	9300-34800	4400	--	--	--
4.	Asst. Divisional Fire Officer	9300-34800	4300	--	--	--
5.	Station Officer	9300-34800	4200	4	01	03
6.	Assistant Station Officer	9300-34800	4200	13	09	04
7.	Sub-Officer	5200-20200	2800	--	--	--
8.	Leading Fireman/Rescuer	5200-20200	2400	28	14	14
9.	Driver Operator	5200-20200	2000	28	18	10
10.	Driver	5200-20200	2000	07	02	05
11.	Fireman/Rescuer	5200-20200	4600	126	87	45
12.	Driver (HMV)	5200-20200	2000	07		
13.	Jr. Engineer(Mech.)	9300-34800	4300	01	01	--
14.	Sr. Clerk	5200-20200	2400	01	01	--
15.	Clerk	5200-20200	2400	03	03	--
16.	Peon	4440-7440	1300	02	01	01
17.	Driver (Contract basis)	8071/- Fixed	--	01		
18.	Cleaner Fireman (Contract)	6841/- Fixed	--	01		

*Presently charge of CFO is managed by Dy.CFO(i/c)

Sr. No.	Designation	Required as per the S.F.A.C.	No. of Posts		
			Sanctioned	Filled	Vacant
1.	Chief Fire Officer	01	01	--	01
2.	Dy. Chief Fire Officer	01	01	01	01
3.	Divisional Fire Officer	02	--	--	--
4.	Asst. Divisional Fire Officer	--	--	--	--
5.	Station Officer	04	04	01	03
6.	Assistant Station Officer	12	13	09	04
7.	Sub-Officer	--	--	--	--
8.	Leading Fireman/Rescuer	48	28	14	14
9.	Driver Operator	84	28	18	10
10.	Driver	27	07	02	05
11.	Fireman/Rescuer	315	126	87	45
12.	Driver (HMV)				
13.	Jr. Engineer(Mech.)		01	01	--

(Space Left Intentionally blank)

D.	Response Mechanism : (Communication, Warning and Operational Procedures)	
1.	Centralized Control Room/Emergency Operation Rooms for Handling Disaster is provided or in operation.	Yes. Each Fire station has the Sub Control Room which is in coordination with the existing Vashi Fire Station C.R used as EOC.
2.	Internet Connectivity is provided for all fire stations.	No.
3.	Computerizations of centralized control room is done? i.e. all the fire stations are connected with internet to Centralized control room.	No.
4.	Communication System (Like VHF/UHF with details of Frequency should be given.)	Yes.
5.	Any warning system is design to alert the occupants in case of disaster(Tie ups with Radio, TV channels, Cable Channels - Yes (DMP) Mobile service providers etc.)	10 siren in the city located at various location and tested by Ward authority.
6.	Is Systematic Operational Procedures(SOP's) are in place for responding to any emergency? Please provide copies of the SOP's	Yes ,Copy Attached.
7.	Please provide cities digitized maps (which shows road, rail, airports, sea ports, and other vital installations.)	Attached Annexure- I, Nodes of NMMC
8.	Is all fire appliances are provided with Global Positioning System devices i.e. GPS system. Provide details.	No.
9.	Is all fire appliances are provided with Vehicle tracking system. Provide details	No

E.	Training, Exercises, Evaluations and Corrective Actions :	
10.	Do you have any Fire & Emergency Training School/ centre for imparting Training to your staff or public. Please provide details.	No
11.	Type of training program conducted in the training school/ centre.	No
12.	Is the residential facility available in the training centre.	No
13.	Number of class rooms available in the training centre.	No
14.	Number of staff made available to the training centre.	No
15.	Please provide the details of the Labs, laboratory, library available In the training centre.	No
16.	Any Auditorium, Convention Hall available in the training centre. Please provide seating capacity.	No
17.	Does you impart training to outsiders or industries or public.	No
F.	Financial Management of Fire & Emergency Service : (Fire Tax, Fire Cess, Capitation Fees, Service Charges etc.)	
1.	What are the statutory instruments(Special Act, Corporation Council Acts Rules,) to levy taxes / Cess as service Charge. Please give details thereof	1949 BPMC Act.
2.	Do you recover Fire Tax or Cess from the properties in the city. Please provide circular or office order	Yes.
3.	Do you levy any other fees or tax for special or High Rise buildings. Please provide circular or office order	Yes . Revised Fire Protection Fund sanctioned vide Govt. Notification No.AFS-2009/601/C.R.94/09/UD-20. Dt.04 Oct 2010
4.	Any fees levied for grant of Fire Approvals for buildings. Please provide a copy of circular.	Yes.
5.	Do you charge any special charges for standby duties or service rendered. Please provide circular or office order.	Yes.

6.	Do you have separate fund for up gradation of fire and emergency services	Budget Provision.
----	---	-------------------

7. Details of Expenditure of Fire Service

Sr. No.	Year	Establishment + Administrative Expenditure	Maintenance Expenditure	Civil Expenditure	Other Expenditure
1.	2004-05	67.92	1.07	--	5.00
2.	2005-06	72.74	2.89	--	2.05
3.	2006-07	81.38	6.38	--	2.31
4.	2007-08	156.83	8.50	41.27	1.81
5.	2008-09	209.13	18.25	114.99	2.56

As per Annexure A.28 of NMMC Budget (2007-08 Revised & 2008-09 Actual)

#As per Annexure A.26 of NMMC Budget (2009-10 Revised & 2010-11 Actual) &

As per Schedule B.13 of NMMC Budget (2009-10 Revised & 2010-11 Actual)

8. Details of Future Plan

Sr. No.	Year	In Lakhs	% of Expenditure of Fire Department with respect to funds allocated
1.	2010-11		
2.	2011-12		
3.	2012-13		
4.	2013-14		
5.	2014-15		

9. Give details about the income received by your Fire Service

SR. NO.	Year	Income Received		
		Fire Tax	Capitation Fee	Any other
1.	2004-05	128.03	243.93	5.15
2.	2005-06	171.07	107.61	9.15
3.	2006-07	190.77	152.71	8.82
4.	2007-08	230.33	90.12	2.27
5.	2008-09	271.08	131.61	16.60
6.	2009-10	284.69	233.17	20.32

As per Annexure A.26 of NMMC Budget (2009-10 Revised & 2010-11 Actual)

G	Human Resource Management :	
A.	Manpower Planning	
B.	Number of post sanctioned and vacant	As per the details provided above.
C.	Recruitment procedure i.e	Obstacles, Written Test, Interview, Medical
I.	Recruitment Rules	As per Government Of Maharashtra
ii.	Group Discussions	Yes.
iii.	Personal Interview	Yes.
D.	Training and Development	Employees are sent for training N.F.S.C Nagpur & S.F.T.C ,Mumbai
1.	Induction Training	No.
2.	Refresher Training	Yes. Done at station level.
3.	Motivation Training	Yes. Done at station level.
4.	Special Skill Training	New equipment training.
5.	Any other	
E.	Carrier and Successor plan	
F.	Migration plan	No
G.	Retirement	Superannuation at the Age 58 yrs.
H.	Plan for utilization of retired persons services	Yes. Retired experienced personnel's are utilized for Disaster Preparedness & Prevention

4. PERSONAL INFORMATION OF EACH EMPLOYEE OF THE FIRE BRIGADE

Sr.	Name	Local Address	Birth Date	Education	Completed Courses & Name of Organisations	Blood Group	Extra Curricular Activity	Physical Fitness Details (Serious Sickness if any)	Nos. of Member in Family	Member of Welfare Association Yes / No	Years of Blood Donation
1	2	3	4	5	6	7	8	9	10	11	12
1	Mr.Vijay Shantaram Rane	3/30,Shivaneri Building , Dadasaheb Falke Road,Dadar(E),Mumbai.	07/07/1971	B.Sc, LLB	1. ASO Mumbai Fire Brigade 2. GI Fire E (India) 3. IFE Delhi 4. MI Fire E (UK) 5. IFE (UK) 6. DIS (MSBT) 7. D.O NFSC Govt. Of India	A+	Ground Activity	Physically Fit	06	Yes	--
2	Mr.Jagdish Tukaram Patil	Sravani Sadan House NO.274,Sec-20,Belapur, Navi Mumbai	01/07/1966	B.A	Fireman Course from State Fire Training Centre Mumbai. SO-NFSC Nagpur	AB+	Ground Activity	Physically Fit	04	Yes	--
3	Mr.Vikas Duttatrya Koli	House No.1219,Shabaj Gaon,Post-Kokan Bhavan,Nav Mumbai	11/05/1967	SSC	Firemen course State Fire Training Centre Mumbai. SO-NFSC Nagpur	A+	Ground Activity	Physically Fit	04	Yes	--

4	Mr.Ganesh Vishwanath Patil	At.Post -Darave Gaon,Navii Mumbai.	01/04/1965	B.A	Fireman Course State Fire Training Centre Mumbai. SO-NFSC Nagpur	O +	Ground Activity	Physically Fit	03	Yes	--
5	Mr.Gorakhanath Shankat Koli	At.post Shahabaj, Fanaspada,CBDNavii Mumbai.	01/06/1969	9 th pass	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	04	Yes	--
6	Mr.Vivek Bhagawan Mhatre	Ambika Nivas, At post - Koparkhairne,Sec-19,Navii Mumbai	08/11/1968	B.A	Fireman Course State Fire Training Centre Mumbai. SO-NFSC Nagpur	B+	Ground Activity	Physically Fit	03	Yes	--
7	Mr.Suresh Kaluram Patil	At-Rodpali,Post-Navade,Tal-Pancvel,Dist-Raigad.	01/06/1962	8 th pass	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	05	Yes	--
8	Mr.Uday Govind Tandel	Govind Nivas,At-Karave,Post-Darave,Navii Mumbai	01/09/1966	8 th pass	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	04	Yes	--
9	Mr.Sandesh Ram Channe	At post-Titwala,Tal-Kalyan,Dist-Thane	12/05/1971	9 th pass	Fireman Course form State Fire Training Centre Mumbai.	B+	Ground Activity	Physically Fit	05	Yes	--

10	Mr.Vijay Dinkar Shedge	At post-Bharatgaon,Tal & Dist- Satara	15/06/1966	7 th pass	--	A+	Branto Operator	Physically Fit	04	Yes	--
11	Mr.Ashok Nathu Thakare	At-Nahnave,past-Hivarkhed,Tal – Chandvad,Dist- Nashik	02/06/1963	7 th pass	--	B +	Branto Operator	Physically Fit	04	Yes	--
12	Mr.Ganesh Bhagawan Gade	At.Moujipur, post-Kanhersar,Tal-Rajgunagar,Dist-Pune.	18/12/1979	12 th	National Fire Acadamy, Pune	A +	Ground Activity	Physically Fit	04	Yes	--
13	Mr.Amar Raghunath Gaikwad	At post-Morghar ,Tal-Jawali,Dist-Satara	01/07/1980	10 th	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	02	Yes	--
14	Mr.Rohan Ramesh Kokate	At Post Walpe,Tal-Khare Patan,Dist-Sindhadurga.	21/02/1984	S.Y.B.Com	Fireman Course form State Fire Training Centre Mumbai.	B+	Ground Activity	Physically Fit	01	Yes	--
15	Mr.Purushottam Kisan Gharad	At-pardi,post-Itgaon,Tal-Parshivani, Dist-Nagpur.	25/09/1975	F.Y.B.Com	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	02	Yes	2007
16	Mr.Padaji Kusha Nirgude	At-cherathi, Post - velshet,Tal-Roha, Dist-Raigad	06/06/1975	8th	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	04	Yes	--

17	Mr.Kailash Bajirao waghchoure	At post -Hivare Khurd,Tal-Junnar,Dist-Pune.	14/01/1966	9 th	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	05	Yes	1995
18	Mr.Kishor Babu Kondalkar	At post - Vaki Khurd,Tal-Mahad, Dist-Raigad.	02/07/1969	7 th	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	04	Yes	1994
19	Mr.Sudhakar Ravan Patil	At-Mardi,Post-Shisale,Tal-Amalner,Dist-Jalgaon.	01/06/1970	SSC	Fireman Course State Fire Training centre Mumbai. SO -NFSC Nagpur	O+	Ground Activity	Physically Fit	03	Yes	--
20	Mr.Navnath Haribhau Garud	At post-TAkve Khrud,Tal-Maval,Dist-Raigad.	16/11/1976	SSC	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	02	Yes	2000
21	Mr.Shailesh Sham Jagtap	Jay Maharashtra CHS Ltd.Bld No-3,First Floor,Room No-8,Sector-02,Govandi,Mumbai-43	23/06/1982	HSC	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	03	Yes	--
22	Mr. Chandrakant	At- Rautwadi, post -Malgaon,	24/01/1982	HSC	Fireman Course form State Fire Training	A+	Ground	Physically	04	Yes	--

	Shankar Ghadge	Tal-Wai,Dist-Satara.			Centre Mumbai.		Activity	Fit			
23	Mr.Vivek Mahabaleswar Kalgutkar	At-Karwar-Kondibaug,post-Karwar, Dist - Karwar	19/06/1985	SSC	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	03	Yes	2000
24	Mr.Manoj Bhimrao Pakdhune	NarayanNagar Daryapur,Tal-Daryapur,Dist-Amravati	01/07/1987	HSC	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	01	Yes	--
25	Mr.Shrikant Balkrishna Sawant	Sonurle,At post-Ghodwade,Tal-Shahuwadi,Dist-Kholhapur.	18/04/1985 0	S.Y.B. Com	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	01	Yes	2007
26	Mr.Hiraman Damodar Patil	At Post-Vadhav,Tal-Pen,Dist-Raigad.	01/09/1978	B.A	Fireman Course form State Fire Training Centre Mumbai.	B+	Ground Activity	Physically Fit	03	Yes	2007
27	Mr.Sandeep Haribhau Naik	At-Valki,Tal & Dist-Ahmadnagar	20/01/1983	B.A	National Fire Academy Training centre Pune.	B+	Ground Activity	Physically Fit	04	Yes	2006

28	Mr.Hemant Raghunath Bhoje	Janu Bhoje Chal,Kokani Pada,Near Hanuman Mandir,Malad(E)Mumbai	06/04/1979	B.A	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	02	Yes	--
29	Mr.Jetendra Bhattu Bhoje	N-32,N-7/25/4,Swami vivekanand Nagar,CIDCO, Nashik-9	10/06/1982	B.A	National Fire Academy Training centre Pune.	A+	Ground Activity	Physically Fit	02	Yes	--
30	Mr.Nitesh Narayan Patil	At Post - Penjari,Tal-Alibaug,Dist-Raigad.	16/02/1978	S.Y.B. Com	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	01	Yes	2009
31	Mr.Vijendra Jayavant Ghag	At post-Kharvate, Vitthalwadi,Tal-Chiplun,Dist-Ratnagiri.	02/10/1983	BA	Fireman Course form State Fire Training Centre Mumbai.	B+	Ground Activity	Physically Fit	01	Yes	--
32	Mr.Kunal Sitaram Lad	At post-Moram,Tal-Shahuwadi,Dist-Kolhapur	26/05/1982	SSC	Fireman Course form State Fire Training Centre Mumbai.	AB+	Ground Activity	Physically Fit	01	Yes	2010
33	Mr.Ashok Rambhu	AT-Dharwadi,Post-Chincodi,Tal-	02/06/1977	B.A	Fireman Course form State Fire Training	A+	Ground Activity	Physically Fit	02	Yes	--

	Avhad	Pathardi,Dist-Ahamadnagar.			Centre Mumbai.						
34	Mr.Amar Shantaram Shinde	At Post-Pedanve,Tal-Chiplun,Dist-Ratnagiri.	13/01/1978	10 th	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	03	Yes	2009
35	Mr.Sandeep Vasant Gaikwad	At-Deulkarwadi, post-kasarde,Tal-Kankavali,Dist-Sindhurga.	20/05/1982	HSC	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	02	Yes	--
36	Mr.Atul Chandrakant Bobade.	At-Gavaliwadi, post-Kusur, Tal-Vaibhavwadi,Dist-Sindhurga.	06/06/1980	HSC	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	03	Yes	2005
37	Mr.Abhjeet Hindurao Katkar	At Post-Lodhawade,Tal-Man,Dist-Satara.	29/01/1984	B.Com	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	04	Yes	2006
38	Mr.Bhaiyasah eb Baburao Bhosale	At-Shirur Ghat,Post-Shirur,Tal-Kej,Dist-Beed.	28/03/1980	BA	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	02	No	2006
39	Mr.Nilesh Nathuram Chavan	At post-Chiravali,Tal-Karad,Dist-	18/08/1986	HSC	National Fire Academy Training centre Pune.	O+	Ground Activity	Physically Fit	01	Yes	2009

		Satara									
40	Mr.Rakesh Nivruti Varade	Yusuf Ali Chawl,Juna police Station,Vandrapada,Ambarnath(E)	11/05/1983	S.Y.B. Com	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	01	Yes	--
41	Mr.Mahesh Tukaram Mahadik	At-Goulwadi,post-Muthavali,Tal-Tala,Dist-Raigad.	01/06/1975	HSC	Fireman Course form State Fire Training Centre Mumbai.	B+	Ground Activity	Physically Fit	03	Yes	--
42	Mr.Santosh Prabhakar Jadhav	At post-Malvan,Tal & Dist-Sindhurg.	23/07/1977	BA	Fireman Course form State Fire Training Centre Mumbai.	B+	Ground Activity	Physically Fit	02	Yes	--
43	Mr.Hemant Narayan Bharasat	At-Bharasatmet, Post-Jamsar,Tal-Javhar,Dist-Thane	09/11/1979	HSC	Fireman Course form State Fire Training Centre Mumbai.	B+	Ground Activity	Physically Fit	03	Yes	2008-09
44	Mr.Ramesh Shantaram Jadhav	At post-Kelthan,Tal-Wada,Dist-Thane	09/05/1977	HSC	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	02	Yes	2009
45	Mr.Amrutana nd Dadarao Borade	Ashoknagar,Bhartiya Boudha Vachanalaya,Akola.Dist-Akola.	10/08/1964	B.A	S.F.T. C. Mumbai. S.O-N.F.S.C	B +	Ground Activity	Physically Fit	04	Yes	--

					S.T.O-N.F.S.C						
46	Mr.Vasant Vithoba Gaikwad	At post-Badole,Tal-Akkalkot,Dist-Solapur.	09/08/1958	SSC	--	O+	Ground Activity	Physically Fit	05	Yes	--
47	Mr.Shivram Yashwant Dhumane	At-Varachi Khopoli,post-Khopoli,Tal-Khalapur,Dist-Raigad.	25/05/1975	SSC	S.F.T. C. Mumbai. S.O-N.F.S.C	O+	Ground Activity	Physically Fit	05	Yes	--
48	Mr.Sham Laxman Pawar	At post-Goregaon,Tal-Parner,Dist-Ahamdnagar.	01/06/1964	8 th	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	05	Yes	2002
49	Mr.Lileshwar Dattatraya Thakur.	At-Mendkhal,Post-JNPT,Tal-Uran,Dist-Raigad.	01/06/1962	B.A	S.F.T. C. Mumbai. S.O-N.F.S.C	ORH -	Ground Activity	Physically Fit	04	Yes	--
50	Mr.Harishchandra Shaniwar Mali	At-Akurli Gaon,Tal-Panvel,Dist-Raigad.	01/06/1965	8 th	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	07	NO	--
51	Mr.Vinod Ganpat Gaikwad	At post-Karanjade,Tal-Panvel,Dist-Raigad.	02/06/1971	8 th	Fireman Course form State Fire Training Centre Mumbai.	B+	Ground Activity	Physically Fit	05	--	--

52	Mr.Arun Balkrishna Vichre	At post-Vakheli,Tal-Guhagar,Dist-Raigad.	04/09/1966	9 th	--	A	Ground Activity	Physically Fit	05	Yes	--
53	Mr.Ekanath Rupa Pawar	At-Khandale, Post-Kawadgaon, Tal & Dist-Ahamadnagar.	01/06/1966	HSC	S.F.T. C. Mumbai. S.O-N.F.S.C	AB +	Ground Activity	Physically Fit	02	--	--
54	Mr.Kishor Subramaniya m Mudliyar	Tirupati Balaji,Andrapradesh.	02/11/1965	B.A	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	04	Yes	--
55	Mr.Sachin Madhukar Bhosale	At post Bijgad,Tal-Khed,Dist - Ratnagiri.	04/11/1977	B.A	Fireman Course form State Fire Training Centre Mumbai.	B+	Ground Activity	Physically Fit	05	Yes	--
56	Mr.Umesh Bhanudas Akre	At-Uchali,post-Dandi,Tal-Palghar,Dist-Thane	17/04/1980	B.Com	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	05	Yes	--
57	Mr.Prashant Madhukar Gole	At-Anchad,post-Pugaon,Tal-Roha,Dist-Raigsd	02/09/1976	B.A	Fireman Course form State Fire Training Centre Mumbai.	AB+	Ground Activity	Physically Fit	05	Yes	--
58	Mr.Duttatrya Janardhan	At-Navin posari,Post-Mohpada,Tal-	27/05/1976	SSC	Fireman Course form State Fire Training	A+	Ground Activity	Physically Fit	05	--	--

	patil	Khalapur,Dist- Raigad.			Centre Mumbai.							
59	Mr.Dasharath Bhagwan Kamble	At post- Bhosate,Tal- Madha,Dist- Solapur.	01/06/1966	9th	Fireman Course form State Fire Training Centre Mumbai.	B+	Ground Activity	Physically Fit	05	--	--	
60	Mr.Santosh Ankush Koli	At post-Divale GAon,Post- Kokan Bhavan,Nav Mumbai.	02/01/1975	HSC	Fireman Course form State Fire Training Centre Mumbai.	AB+	Ground Activity	Physically Fit	06	--	--	
61	Mr.Mahesh Sudhakar Kulkarni	At-Belapur Gaon,Post- Kokan Bhavan,Nav Mumbai.	17/02/1975	B.A	Fireman Course form State Fire Training Centre Mumbai.	AB+	Ground Activity	Physically Fit	04	--	--	
62	Mr.Gurunath Anant Patil	At-Karave,Post- Darave,Nav Mumbai.	01/06/1977	HSC	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	04	--	--	
63	Mr.Mahesh Budhaji Patil	At-Karave,Post- Darave,Nav Mumbai.	06/06/1982	B.Com	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	07	Yes	--	
64	Mr.Kiran Janu Patil	At post- kagaon,Bajarpur ,Uran.	22/09/1982	B.A	National Fire Acadamy Training centre Pune.	O+	Ground Activity	Physically Fit	05	Yes	--	

65	Mr.Ganesh Dasharath Dhawale	At post-Walki,Tal & Dist-Ahamadnagar.	07/08/1986	B.A	National Fire Academy Training centre Pune.	B +	Ground Activity	Physically Fit	05	Yes	--
66	Mr.Snehal Ashok Sawat	At post-Khedashi,Tal & Dist-Ratnagiri.	06/09/1982	HSC	Fireman Course form State Fire Training Centre Mumbai.	AB+	Ground Activity	Physically Fit	05	--	--
67	Mr.Kiran Laxman Atkari	At-Sultanpur,Post-Bori,Tal-Junnar,Dist-Raigad.	15/05/1984	HSC	National Fire Academy Training centre Pune.	A+	Ground Activity	Physically Fit	03	--	--
68	Mr.Vikas Uttam More	At post-Nimsod,Tal-Khatav,Dist-Satara.	06/05/1984	HSC	National Fire Academy Training centre Pune.	AB+	Ground Activity	Physically Fit	03	--	--
69	Mr.Dilip Nagu Pawar	At-RAitale, Post-Walpane,Tal-Parner,Dist-Ahamadnagar	01/06/1976	HSC	National Fire Academy Training centre Pune.	B+	Ground Activity	Physically Fit	10	--	--
70	Mr.Vivek Vasant Patil	At post-Bhivara,Tal-Raner,Dist-Raigad	08/03/1987	B.A Appear	National Fire Academy Training centre Pune.	A+	Ground Activity	Physically Fit	05	--	--
71	Mr.Niranjan Ambadas Rodge	At post - Malkhed, Tal-Chandur,Dist-Amravati.	04/07/1975	HSC	Fire Brigade Training,IIME Nagpur,HSC Diploma In Fire Service.	ORH +	Ground Activity	Physically Fit	07	--	--

72	Mr.Santosh Rambhau Patil	At-Aaste,post-Aajiwali,Tal-Panvel,Dist-Raigad.	29/10/1971	SSC	Fireman Course form State Fire Training Centre Mumbai.	B+	Ground Activity	Physically Fit	02	--	--
73	Mr.Rajiv Janardhan Gavand	At – Devnagari,post & tal-Pen,Dist-Raigad.	28/02/1978	B.A	Fireman Course form State Fire Training Centre Mumbai.	B+	Ground Activity	Physically Fit	05	--	--
74	Mr.Goutam Tukaram Patil	At-Bhatepada, Post-Aliyabad, Tal-Satana, Dist-Nashik	01/06/1980	B.A	National Fire Acadamy Training centre Pune.	B+	Ground Activity	Physically Fit	03	--	--
75	Mr.Sudhir Pratap Gavit	At-Vadsama, Post-Chitavali, Tal-Navapur, Dist-Nandurbar.	15/09/1985	HSC	National Fire Acadamy Training centre Pune.	O+	Ground Activity	Physically Fit	05	--	--
76	Mr.Sunil Shankar Gavit	At post - Songir,Tal & Dist-Dhule.	03/06/1983	HSC	National Fire Acadamy Training centre Pune.	B+	Ground Activity	Physically Fit	05	--	--
77	Mr.Sandeep Namdev Buge	At- Mohajdevade,Tal-Pathardi,Dist-Ahamadnagar.	21/07/1981	HSC	Fireman Course form State Fire Training Centre Mumbai.	B+	Ground Activity	Physically Fit	03	--	--
78	Mr.Chaitram Bhattu Choudhary	At- Surajyamal,post -Dogshirvade, Tal-Sakri, Dist-	26/06/1981	HSC	National Fire Acadamy Training centre Pune.	A+	Ground Activity	Physically Fit	05	--	--

		Dhule.									
79	Mr.Mahadev Kashinath Gavade	At post-Varachi Galli,Dhanagarwada,Tal Tasgaon,Dist-Sangali.	01/02/1985	HSC	National Fire Academy Training centre Pune.	B+	Ground Activity	Physically Fit	05	--	--
80	Mr.Sanjay Raghunath Sanap	At-Sonosi,post-Nannaj Bu,Tal-Sangamner,Dist-Ahamdnagar.	13/08/1981	B.A	CISF Home Ministry fire training one year.	O+	Ground Activity	Physically Fit	03	--	2001 to 2003 , 2005 & 2008.
81	Mr.Sachin Prabhakar Babar	At post-Udtare,Tal-Vasai,Dist-Satara.	07/11/1977	SSC	Fireman Course form State Fire Training Centre Mumbai.	B+	Ground Activity	Physically Fit	06	--	--
82	Mr.Chandrash ekhar Manohar Bhavsar	586,Vitthal peth,Panjarpol,Jalgaon.	14/01/1986	B.A	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	05	--	--
83	Mr.Satish Popat Borhade	At post-Sonavane Vadi,Tal & Dist-Solapur.	31/12/1984	HSC	National Institute of Fire & Disaster Manegment Nagpur.	B+	Ground Activity	Physically Fit	03	--	--
84	Mr.Ashok Sonaba	At post-Aadhalgaon,Tal-	23/07/1977	HSC	National Fire Academy	O+	Ground	Physically Fit	04	--	--

	Dhotre	Srigonda,Tal-Ahamadnagr.			Training centre Pune.		Activity				
85	Mr.Umesh Shantaram Jungare	At-Kasarkhand,post -Somtane,Tal-panvel,Dist-Raigad.	01/08/1983	B.Sc	National Institute of Fire & Disaster Manegment Nagpur.	OB+	Ground Activity	Physically Fit	04	Yes	--
86	Mr.Rohit Ramdas Bandkar	At post-Tembvali,Tal-Devgad,Dist-Sindhurga.	06/03/1984	SSC	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	05	--	--
87	Mr.Yogendra Machaindra Chunade	At post-Nigadi,Tal-Haveli,Dist-Pune.	09/08/1981	HSC	National Fire Acadamy Training centre Pune.	B+	Ground Activity	Physically Fit	04	--	--
88	Mr.Maheshkumar Balvant Mane	At post-Tugaon,Tal-Umrge,Dist-Osmanabad.	03/06/1975	SSC	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	05	--	--
89	Mr.Prabhakar HIRAMAN Gadhe	At post-Karanjade,Tal-Panvel,Dist-Raigad.	18/03/1965	B.A.	S.F.T. C. Mumbai. S.O-N.F.S.C S.T.O-N.F.S.C D.O - N.F.S.C	O+	Ground Activity	Physically Fit	05	--	2009
90	Mr.Arun Ramkrishna Bhoir	At-Karave Gaon,Post-Nerul,Nav	28/09/1966	HSC	S.F.T. C. Mumbai.	B+	Ground Activity	Physically Fit	05	Yes	2009

		Mumbai.			S.O-N.F.S.C						
					S.T.O-N.F.S.C						
91	Mr.Jaywant Shantaram Tandel	At-Karave Gaon,Post-Nerul,Navi Mumbai.	09/11/1965	SSC	S.F.T. C. Mumbai. NFSC Nagpur -2004	A+	Ground Activity	Physically Fit	05	Yes	2009
92	Mr.Ramchandra Gajanan Choudhary	Late-Gajanan Smurti,House No-60,At post-Kalamboli,Tal-Panvel,Dist-RAigad.	01/06/1969	SSC	S.F.T. C. Mumbai. NFSC Nagpur -33	B+	Ground Activity	Physically Fit	05	Yes	2004
93	Mr.Upendra Keshav Bhoir	At-Karave Gaon,Post-Nerul,Navi Mumbai.	24/04/1969	B.A	S.F.T. C. Mumbai. NFSC Nagpur -2005	A +	Ground Activity	Physically Fit	06	Yes	--
94	Mr.Ramesh Narayan Telange	At post-Kelavane,Tal-Panvel,Dist-Raigad.	01/06/1965	9 th	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	06	Yes	2009
95	Mr.Anil Dhondur Surve	At Post-Karanjali,Tal-Mahad,Dist-Raigad.	27/07/1974	9 th	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	06	Yes	2009
96	Mr.Vijay Nagnath Gaikwad	At post-Badola budruk,Tal-Akkalkot,Dist-Solapur.	01/06/1963	9 th	--	B+	Ground Activity	Physically Fit	06	Yes	--
97	Mr.Kailash	At post-Pemgiri,Tal-	14/01/1964.	9 th	--	A+	Ground	Physically Fit	06	--	2006

	Bhaskar Dixit	Sangamner, Dist- Ahamadnagar					Activity				
98	Mr.Pundlik Ditaram Bhoye	At post- Beriste, Tal- Mokhada, Dist- Thane.	01/06/1970	8 th	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	06	--	--
99	Mr.Sharifkhan Khudabaksha Tadvi	At post- Uthakheda, Tal- Raver, Dist- Jalgaon.	02/06/1974	HSC	CISFSTI Hyderabad Hakimpeth.	A+	Ground Activity	Physically Fit	05	--	--
100	Mr.Premanan d Vasant Thakur	At- Mhatroli, post- SaraI, Tal- Alibaug, Dist- Raigad.	04/08/1975	HSC	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	05	Yes	--
101	Mr.Sachin Narayan Kadam	At post- Bhukarwadi, Tal- Khatav, Dist- Satara.	28/05/1984	SSC	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	04	--	2004
102	Mr.Vinod Duttaram Dethe.	At post- Manchar, Tal- Ambegaon, Dist- Pune.	15/12/1970	9 th	Fireman Course form State Fire Training Centre Mumbai.	B+	Ground Activity	Physically Fit	05	--	--
103	Mr.Ramesh Rajaram Kokate	At-Aksharepada, Post-Khadas, Tal-Karjat, Dist- Raigad.	01/06/1972	9 th	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	06	--	--

104	Mr.Nitin Gorkhanath Kamble.	At post-Aakoli Jahangir,Tal-Aakot,Dist-Akola.	13/03/1969	SSC	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	05	Yes	--
105	Mr.Pandurang Damodar Hamre	At post-Khodala,Tal-Mokhada,Dist-Thane.	01/06/1970	9 th	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	06	Yes	--
106	Mr.Ajay Manohar Ombalkar.	At post-Omal,Tal-Chipalun,Dist-Ratnagiri.	13/06/1980	SSC	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	06	--	--
107	Mr.Mahendra Madhukar Shirsat	At-Dhakate mohul,post-Natal,Tal-Kankavali,Dist-Sindhadurga.	01/06/1975	B.A	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	05	--	--
108	Mr.Dipak Navnath Jawale	At-Khadki Devala,Post-Khadki,Tal-Vadvani,Dist-Beed.	02/09/1980	SSC	Fireman Course form State Fire Training Centre Mumbai.	B+	Ground Activity	Physically Fit	05	Yes.	--
109	Mr.Sachin Savkar Shinde	Suman nivas,Brahmdev Nagar,Hodagi road,At post - Solapur,Tal & Dist-Solapur.	29/09/1976	B.A	Fireman Course form State Fire Training Centre Mumbai.	B+	Ground Activity	Physically Fit	04	--	--

110	Mr.Prakash Chahu Patil	At- Sangade,Post- Aajivali,Tal- Panvel,Dist- Raigad.	29/06/1974	SSC	Fireman Course form State Fire Training Centre Mumbai.	ARH+	Ground Activity	Physically Fit	04	Yes.	--
111	Mr.Jitendra Duttaram Shirke	At post-Khopad, Tal-Chipalun, Dist-Ratnagiri.	25/09/1974	SSC	Fireman Course form State Fire Training Centre Mumbai.	--	Ground Activity	Physically Fit	06	Yes.	--
112	Mr.Srikant Devidas Joshi	Fadke Nagar,Dabki road,At post ,Tal & Dist-Akola.	07/04/1974	HSC	Fireman Course form State Fire Training Centre Mumbai.	ARH+	Ground Activity	Physically Fit	02	--	--
113	Mr.Murlidhar Namdev Pawar.	At post- Kanher Khed,Tal- Koregaon,Dist- Satara.	14/07/1980	B.Com	Fireman Course form State Fire Training Centre Mumbai.	--	Ground Activity	Physically Fit	06	--	--
114	Mr.Santosh Bhagwat Jadhav	At post- Lhasurne,Tal- Koregaon,Dist- Satara.	01/03/1983	HSC	All India Local Self Government Batch No-7	A+	Ground Activity	Physically Fit	06	--	--
115	Mr.Shekhar Sakharam Khandese	At post- Manchar,Tal- Ambegaon,Dist- Pune.	08/06/1982	HSC	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	04	Yes	--

116	Mr.Satish Mahadev Kate	At post-Kashid,Tal-Murud Janjira,Dist-Raigad	02/08/1983	HSC	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	05	Yes	--
117	Mr.Devidas Laxman Deshmukh	At - palipotol,post-Golwadi,Tal-Karjat,Dist-Raigad.	01/02/1974	SSC	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	05	Yes.	--
118	Mr.Jagannath Gorkhanath Khatke.	At post-Aatake,Tal-Karad,Dist-Satara.	05/06/1981	SSC	Fireman Course form State Fire Training Centre Mumbai.	B+	Ground Activity	Physically Fit	05	Yes.	--
119	Mr.Ganesh Narayan Patil	At-Sangade,Post-Aajivali,Tal-Panvel,Dist-Raigad.	06/01/1981	HSC	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	04	Yes.	--
120	Mr.Milind Suresh Jadhav	Dnyaneshwar Nagar,At-Malegaon,Post-Malegaon Camp,Tal-Malegaon,Dist-Nashik.	26/02/1983	S.Y.B.A	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	05	Yes.	2009
121	Mr.Ajit Mohamad Tadvi	At post-Gangasagar, Tal-Yaval, Dist-Jalgaon.	01/08/1981	HSC	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	05	Yes.	--

122	Mr.Anup Harishchandra Jagtap	At- Shigavan,post-Aambavade,Tal-Mandangad,Dist-Ratnagiri.	23/09/1974	11 th	LPA first &SFTC Industrial Safty	A+	Ground Activity	Physically Fit	05	Yes.	2008
123	Mr.Pravin Duttatrya Devakar	At post-Mahsawad,Sanagar Galli,Tal-Maan,Dist-Satara.	29/09/1981	B.A	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	03	--	2009
124	Mr.Kiran Sarjerao Bhosale	At post-Apsinge,Tal-Koregaon,Dist-Satara.	04/01/1983	HSC	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	03	--	--
125	Mr.Rakesh Ananda Wadile	Police Line No-2,At post & Tal-Chopada,Dist-Jalgaon.	29/10/1971	SSC	Fireman Course form State Fire Training Centre Mumbai.	B+	Ground Activity	Physically Fit	02	--	--
126	Mr.Yashawan t Rajmal Choure	At-Punyacha Pada,Post-Tambhe,Tal-Sakri,Dist-Dhule	07/12/1975	HSC	Fireman Course form State Fire Training Centre Mumbai.	O+	Ground Activity	Physically Fit	03	--	--
127	Mr.Sameer Baburao Parab	At post-Sarambal,Tal-Kudal,Dist-Sindhurga.	17/04/1980	B.A	Fireman Course form State Fire Training Centre Mumbai.	A+	Ground Activity	Physically Fit	03	--	2009

128	Mr.Pravin Daji Bandakar	At post- Tembavali, Tal-Devgad ,Dist- Sindhurga.	05/08/1981	B.Sc	Fireman Course form State Fire Training Centre Mumbai.	B+	Ground Activity	Physically Fit	03	Yes.	
129	Mr.Sakharam Keshav Khandeshe	At post- Manchar,Tal- Aambegaon,Dist -Pune	12/06/1960	9 th	--	O +	National Level Shooting	Physically Fit	04	--	--
130	Mr.Sunil Manohar Gaikwad	At post- Akluj,Tal- Malshiras,Dist- Solapur.	26/01/1965	9 th	--	O +	National Level Shooting	Physically Fit	06	--	2001

5. GAP ANALYSIS for FIRE STATIONS AS PER S.F.A.C.

SR. NO.	Existing Fire Stations		Required Fire Stations	Remarks
	03+01=04		08	
1.	Vashi Fire Station	Proposed Fire Stations 04	Digha	Fire Stations are calculated as per the S. F. A. C. norms
2.	Airoli Fire Station		Koparkhairane	
3.	CBD-Belapur Fire Station		Ghansoli	
4.	Nerul (Under Construction)		Nerul(Phase II)	

Future development and construction of 04 Fire Stations at proposed sites require Budget Provision of 5,00,000,00/- Appr.

6. GAP ANALYSIS for PUMPING UNITS AS PER S.F.A.C.

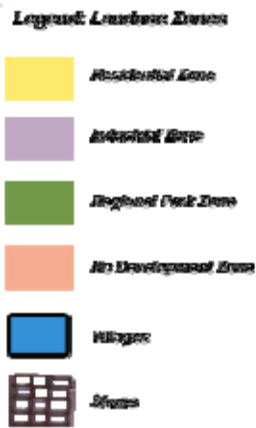
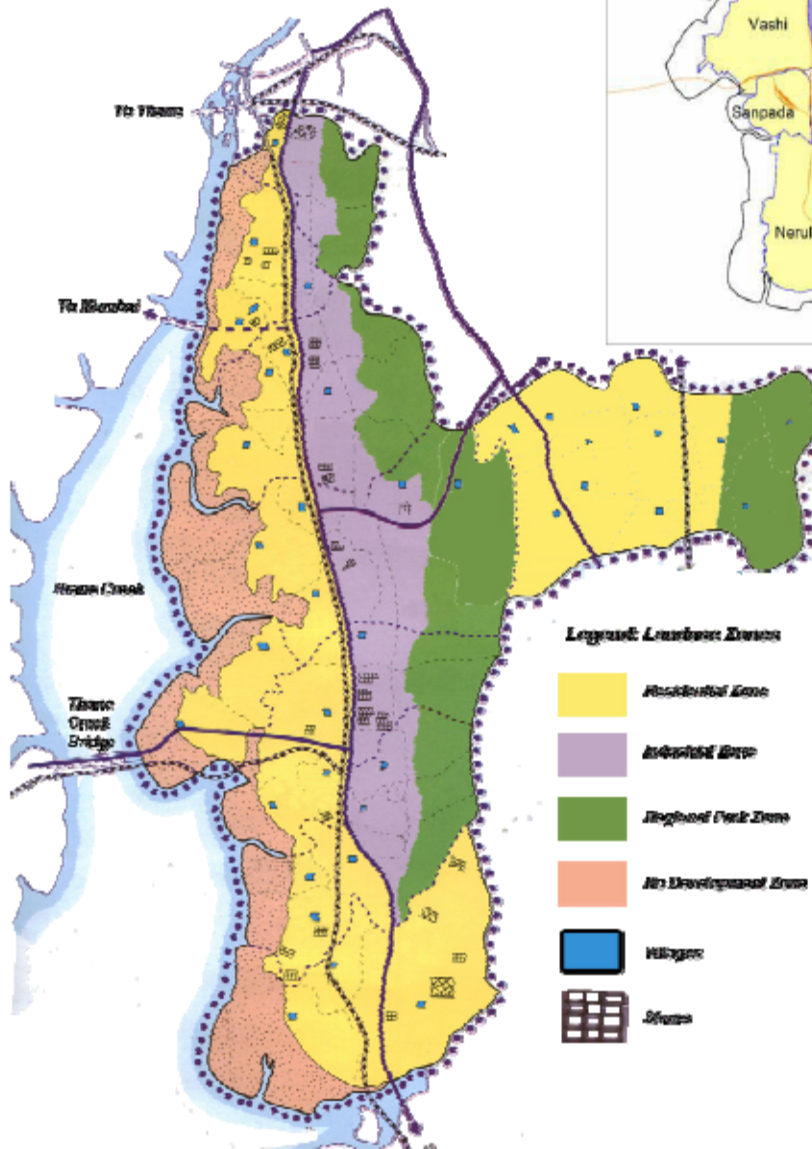
SR. NO.	Type	Admissible	Available	Gap
1.	Fire Station	11	03	08
2.	Fire Tender	11	09	03
3.	Rescue Tenders	01	02	--
4.	Advance Emergency Rescue Tenders	01	--	01
5.	Flood & Rescue Tenders	01	--	01
6.	Hazmat Vans	01	--	01
7.	Turn Table Ladders	01	--	01
8.	Hydraulic Platforms	03	03	--
9.	DCP Tenders	01	--	01

10.	Foam Tenders	01	--	01
11.	Smoke Blowers	02	--	02
12.	Control Post Vans	01	--	01
13.	Water Tankers	02	02	
14.	Ambulances	05	04	01
15.	Water Brouser	02	02	--
16.	B.A. Set	20	20	--
17.	High Pressure Portable Pumps	05	02	03
18.	Search & Rescue Gears Including Lukas,Nike gears, Pneumatic Lifting Bags,Search Camers,Gas Detectors, Thermal Imaging Cameras etc	08	02 Unit	06 Unit for each station

Future development and procurement of the above required Vehicles and Equipments at existing and proposed Fire Stations requires Budget Provision of 10,00,000,00/- Appr

ANNEXURE I NODES OF NMMC

Navi Mumbai Municipal Corporation area
Development Plan



NMMC limits. A detailed break up of land use is given below

Type of area	Area in sqkm
Urban area	52.6
MIDC area	25.6
Village/agriculture	27
Marshy land	30.75
Forests/sanctuaries	26.55
Total	162.5

Source: NMMC

Out of total developed area of 162.50 sq km, 50.79% area is used for urban commercial, industrial, administrative areas and infrastructure such as crematorium, water supply and sewage disposal, roads, railways. 19.92 sq km area is undeveloped. There s forest area of 26.55sqkm, 0.52 sq km garden area, and 0.52 sq km lake area and 34.2 km creek length within NMMC limits. A detailed break up of land use is given below:

Table 8 Land use statement of NMMC administrative zones (in Sqkm)

Node	Residential	Industrial	Regional park/forest	Village area	Marshy Area	Total
CBD Belapur	16.5	0	0	-	8	24.5
Nerul	3.75	4	4.15	-	3	14.9
Vashi	4.75	0	0	-	3.75	8.5
Turbhe	7.25	3.1	4	-	1.5	15.85
Koaprkhalrane	7.75	7	9.75	-	7.75	32.25
Ghansoli	7.25	6.75	4.5	-	4	22.5
Airoli	4.6	0.75	0.4	-	2	7.75
Digha	0.75	4	3.75	-	0.75	9.25
Dahisar	0	0	0	27	0	27
Total	52.6	25.6	26.55	27	30.75	162.05

Source: NMMC ESR 2005-06

The nodes in NMMC have been discussed as following:

CBD BELAPUR

Central business district is main hub for commercial and official activities. This area is most accessible within NMMC area and is connected to Mumbai through rail and road. It has state of art integrated railway station with shops, departmental stores, showrooms, communication centers, book stalls, restaurants and banks. It is blend of residential and commercial space.

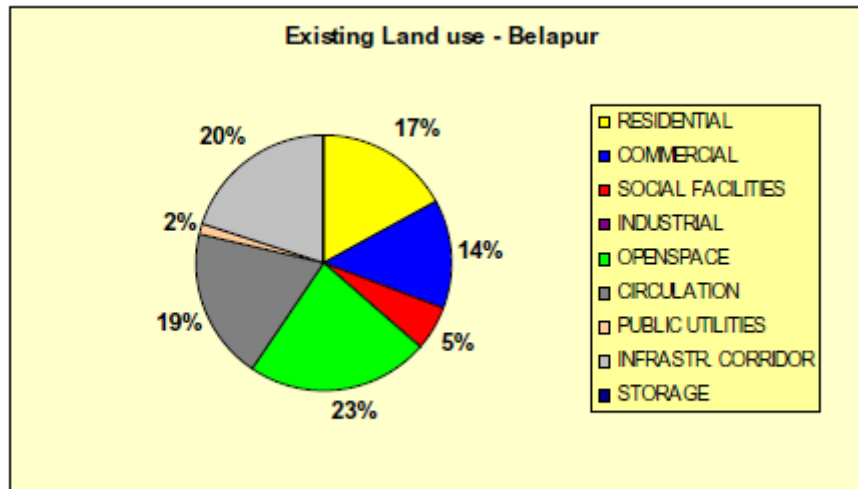
The idea to develop CBD was to promote business opportunities in NMMC area. Since 1990's this area is developing at a faster rate as compared to the other commercial parts of NMMC area. Due to new development of Seaport, Air port & SEZ it will have further commercial importance.

Physical Infrastructure

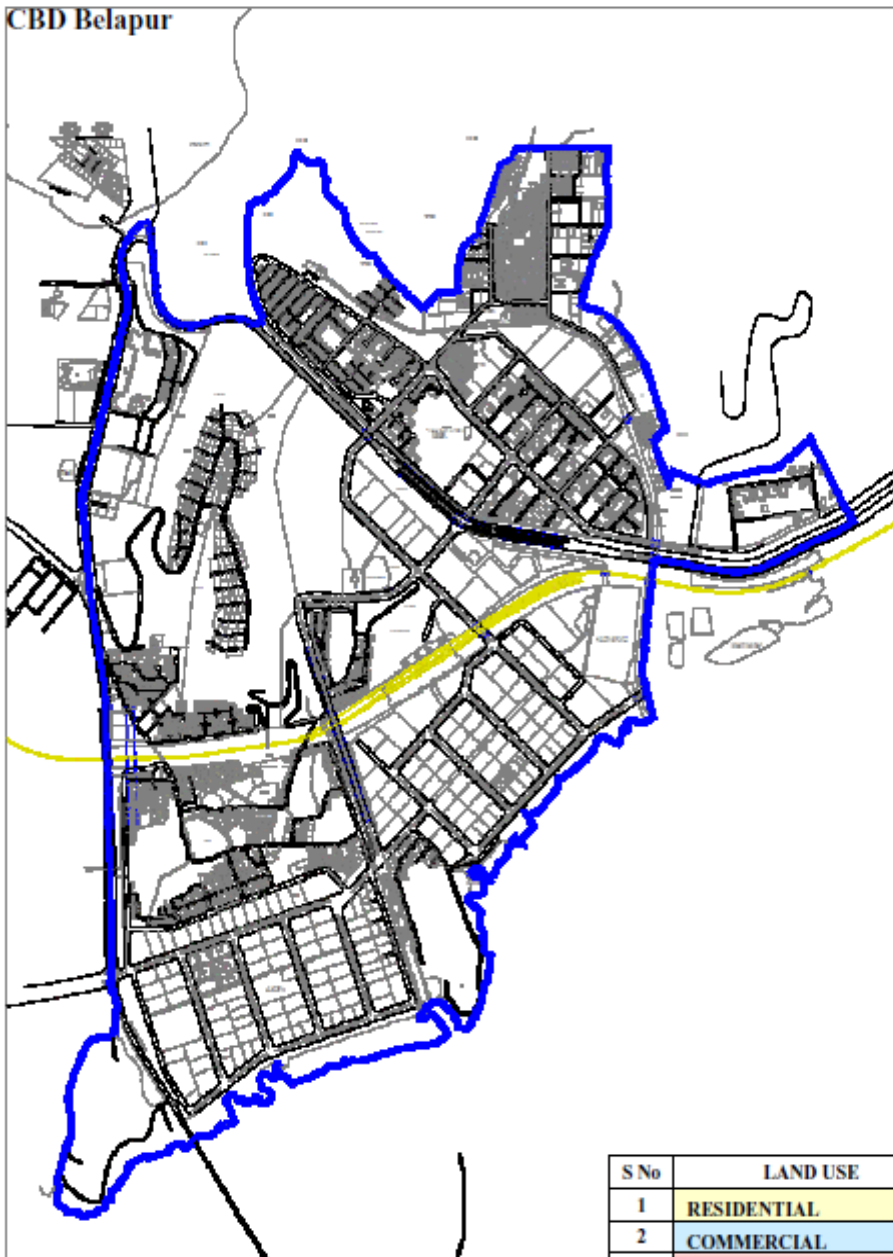
- Roads are well laid out like any other nodes.
- The other physical infrastructure is in place, but need more attention for the aspect of parking in commercial, business district areas & maintenance.

Social Infrastructure

- It fulfils the requirement as per the prevailing norms
- It has higher order professional college.



(Space Left Intentionally Blank)



S No	LAND USE	Area in Ha
1	RESIDENTIAL	104.59
2	COMMERCIAL	85.24
3	SOCIAL FACILITIES	33.460
4	INDUSTRIAL	0.000
5	OPEN SPACE	141.990
6	CIRCULATION	117.910
7	PUBLIC UTILITIES	9.280
8	INFRASTR. CORRIDOR	123.010
9	STORAGE	0.000
10	NET DEVELOPABLE AREA	615.48

NERUL

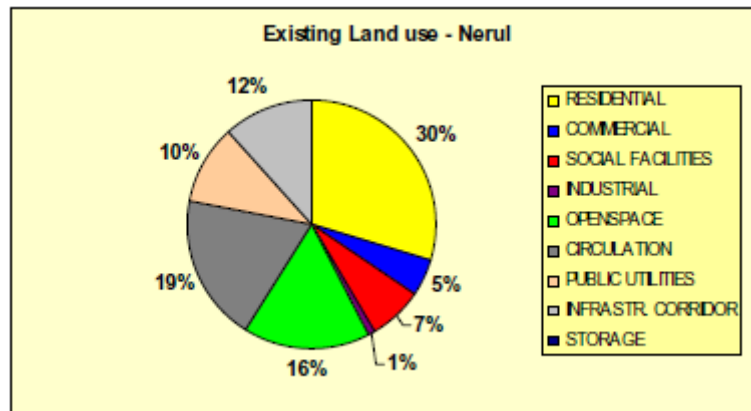
This is biggest residential node and unique in character having longest segment of Mankhurd – Belapur. Panvel – railway pass through this node and having two railway stations. It also has longest water front and many water bodies. It is divided into 58 sectors. All the latest housing societies including NRI complexes like sea wood estates are among prominent one.

Physical Infrastructure:

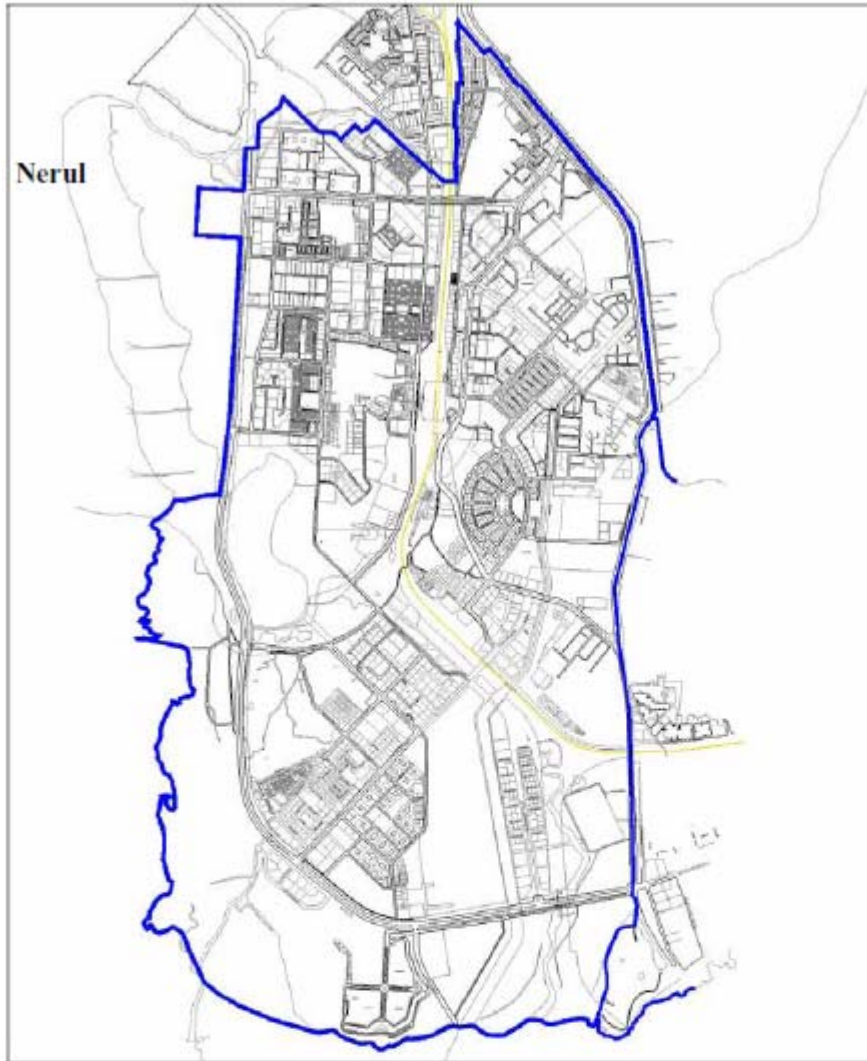
- Like all other nodes this node also has all kinds of physical infrastructure in place except in Goathon areas.
- Roads are also well laid out. Few connecting links are missing which are defined in the transportation chapter.

Social Infrastructure

This node has all kinds of social amenities to the proportion of the population. Even in case of hospital and higher education it has more than norms hence for these facilities it act as serving hub to NMMC area as well as surrounded by regional area. New sports complex D.Y.Patil stadium has been added. This node also has very prominent religious amenities at very important location and close to railway station called as Brahmagiri hill.



(Space Left Intentionally Blank)



S No	LAND USE	Area in Ha
1	RESIDENTIAL	310.61
2	COMMERCIAL	48.20
3	SOCIAL FACILITIES	76.59
4	INDUSTRIAL	9.610
5	OPEN SPACE	171.36
6	CIRCULATION	200.000
7	PUBLIC UTILITIES	106.090
8	INFRASTR. CORRIDOR	123.300
9	STORAGE	0.000
10	NET DEVELOPABLE AREA	1045.76

SANPADA

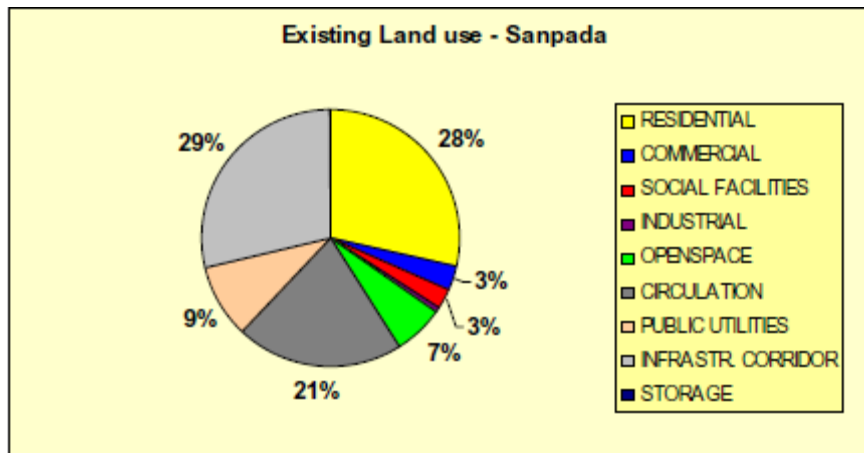
A total of 293.654 ha of area are covered under Sanpada node. This node is developed after the development of Vashi & Nerul node. It always acted as extended suburb of Vashi. It has mix type of population.

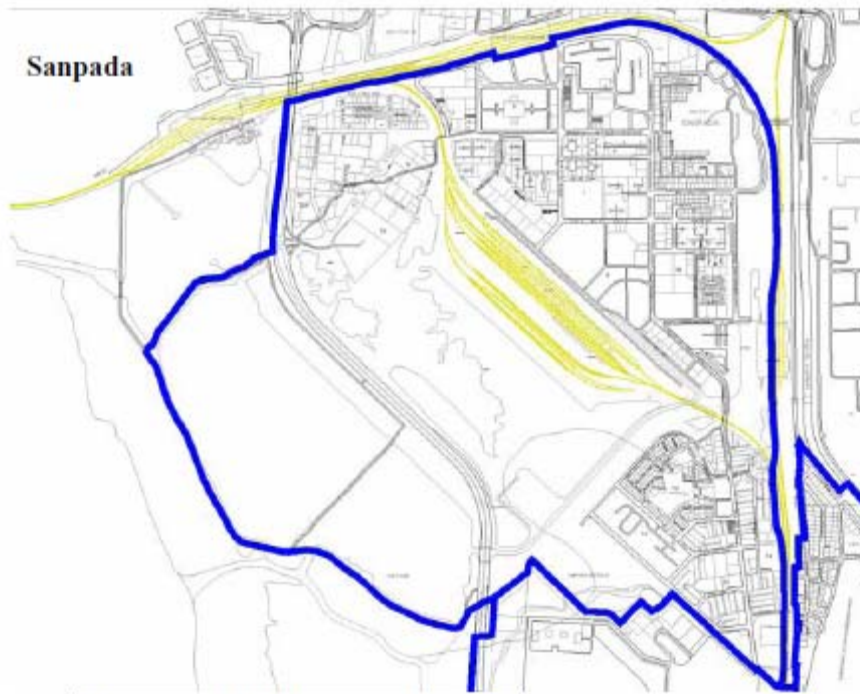
This node has improper access. The accessibility of the node will be improved after the completion of ROB between Sector 1 and 2. This Node is connected to Mumbai by harbour line with two stations Juinagar and Sanpada (Sanpada station serves APMC market at Vashi). Sanpada node is surrounded by Part of Vashi node and Sion panvel expressway on the north side, by Juinagar station on the east, by the palm beach road on the west and by Nerul node on the southern side. The node also has 61 ha of railway car shed in the centre dividing CIDCO constructed housing in east and private plotted development on west.

Sanpada has an excellent frontage of Palm Beach Marg and Thane creek. Sanpada has mix group housing. Some new developments like Millennium Housing have added new era in hi-tech construction in the area.

Physical Infrastructure:

- The entire Physical infrastructure is in place, except the roads in the area under Sect. 14 to 20 which is being developed.
- All roads are properly laid out and presently construction activity is being completed, redoing of surfaces of all roads is very essentials.





S No	LAND USE	Area in Ha
1	RESIDENTIAL	83.136
2	COMMERCIAL	8.573
3	SOCIAL FACILITIES	7.481
4	INDUSTRIAL	1.275
5	OPEN SPACE	18.877
6	CIRCULATION	60.149
7	PUBLIC UTILITIES	26.629
8	INFRASTR. CORRIDOR	84.224
9	STORAGE	0.000
10	NET DEVELOPABLE AREA	290.344

(Space Left Intentionally Blank)

VASHI

Vashi node is the first node which was developed in NMMC area. It is one of two NMMC nodes that directly connect to Mumbai across Thane creek (via the Mankhurd-Vashi Bridge), the other being Airoli to the North.

Vashi is commercial hub of NMMC area. The commercial and residential segments are in an organized and planned pattern. It further adds to self sufficiency of the node within NMMC area.

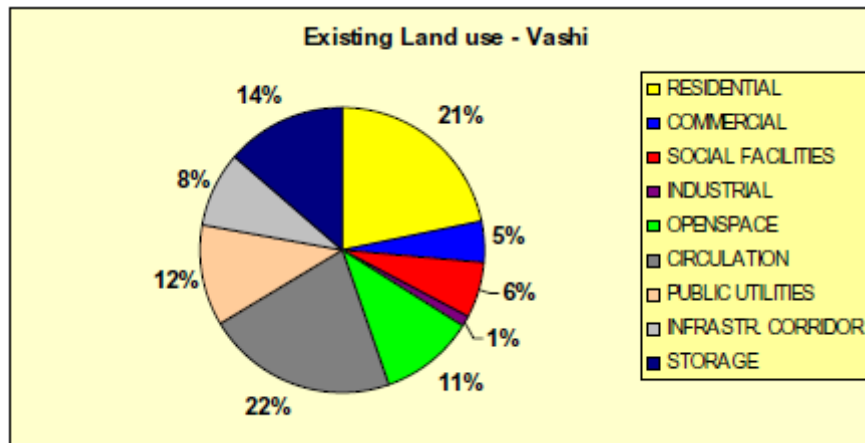
Sector 17, is hosting a dense concentration of small businesses, offices, clinics, retail outlets, restaurants and franchise operations. Sectors 9 and 10 are also heavy with commercial activity, especially retail. Vashi also has the biggest wholesale market for agricultural products in sector 19 and in a part of sector 18. To add more space under parks and recreation a jogging park near Thane creek has been developed.

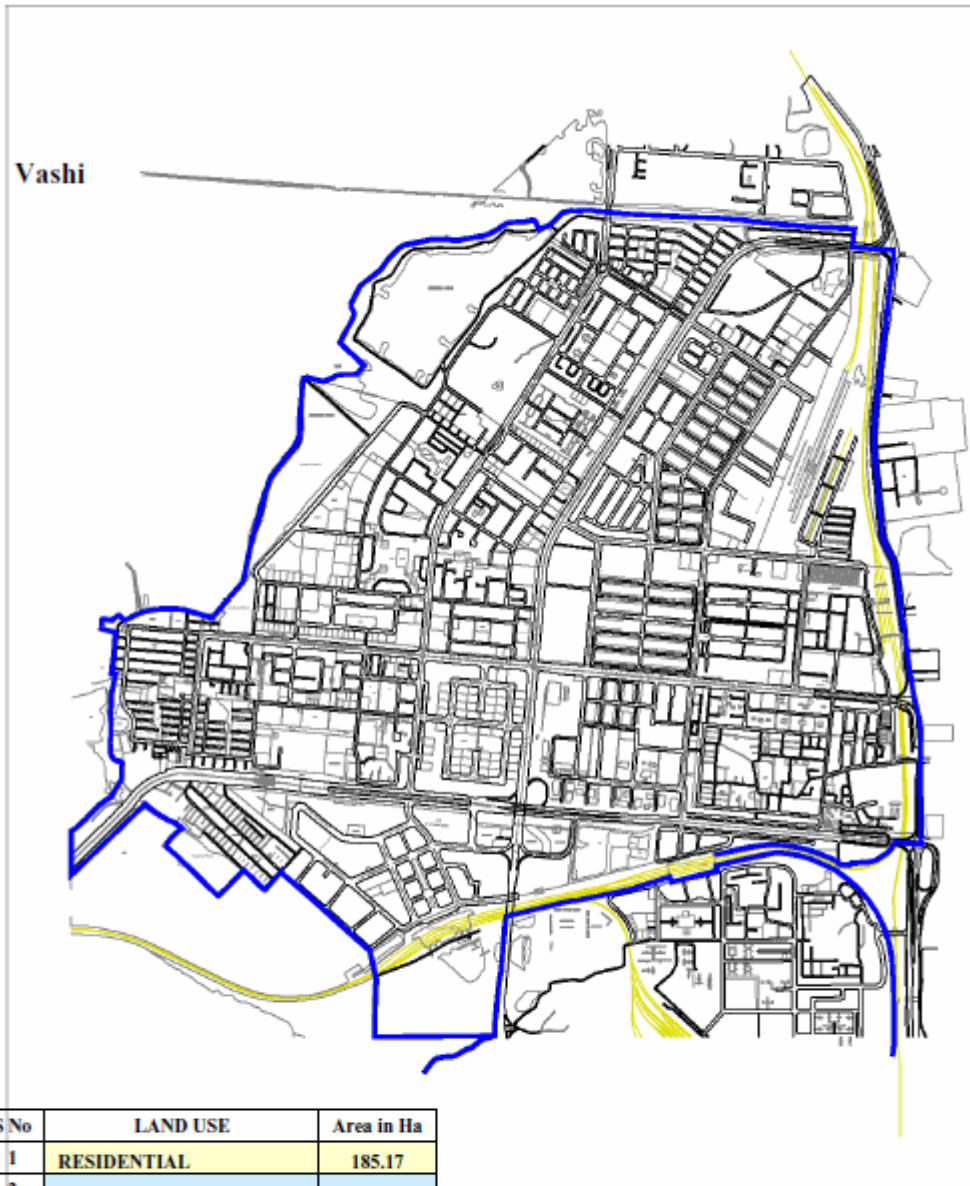
Physical Infrastructure:

- It has been observed that the roads are now fully occupied and running to full capacity. Traffic jam is observed on Vashi –Koparkhairane Link road. To ensure smooth flow of traffic towards Kopar Khairane adequate parking facility along sector 9 and 10 is required.
- The other physical infrastructure is well placed, but need attention from operation and maintenance point of view.
- All holding pond require desilting and straining is required for nallas.

Social Infrastructure

The social infrastructure in Vashi is of high order serving as main hub for NMMC area.





S.No	LAND USE	Area in Ha
1	RESIDENTIAL	185.17
2	COMMERCIAL	39.00
3	SOCIAL FACILITIES	53.110
4	INDUSTRIAL	9.980
5	OPEN SPACE	92.390
6	CIRCULATION	183.830
7	PUBLIC UTILITIES	98.330
8	INFRASTR. CORRIDOR	71.410
9	STORAGE	116.20
10	NET DEVELOPABLE AREA	849.42

KOPAR-KHAIRANE

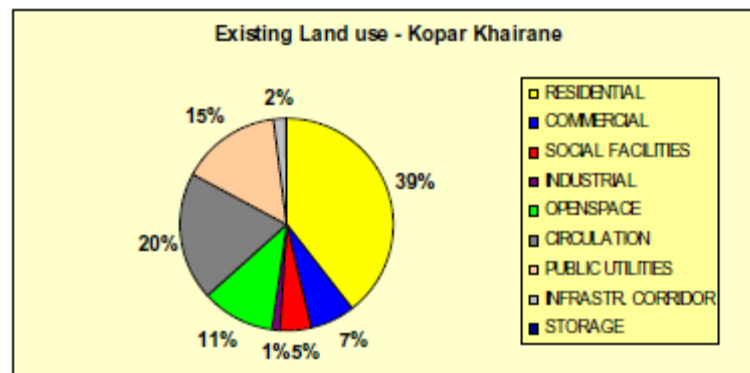
This node is developed by CIDCO mainly for EWS & LIG houses under World Bank project Phase-II: Subsequently all other types of houses were developed by private owners. Initially it acted as extended area of Vashi. The commissioning of Kopar-Khairane station and DKC Knowledge City across Thane-Belapur Road has increased the importance and identity of this node.

Physical Infrastructure

- Being mainly developed for low cost housing road network is of lower order. The growth in national economy has increased the vehicle ownership. The planned development is not coping up with this growth and is causing problems of traffic jam and parking places.
- The front margin in front of commercial plot should be taken over by NMMC on case to case basis and merged into carriageway of road by pushing footpath towards building as prescribed by in the DCR as lay bye. This will facilitate parking of vehicles creating full width of road for traffic movement. As per proposal coastal road will be developed.
- All nallas need training and holding ponds need desilting.

Social Infrastructure

- All social facilities and amenities are as per population norms but of lower order.
- For higher order it has to be dependent on adjoining Vashi area. Common playgrounds are not developed and promenade development will be taken in hand.



Kopar Khairane



S No	LAND USE	K. KHAIRANE
1	RESIDENTIAL	124.78
2	COMMERCIAL	20.910
3	SOCIAL FACILITIES	14.853
4	INDUSTRIAL	4.582
5	OPEN SPACE	33.832
6	CIRCULATION	62.653
7	PUBLIC UTILITIES	48.012
8	INFRASTR. CORRIDOR	5.905
9	STORAGE	0.000
10	NET DEVELOPABLE AREA	315.53

GHANSOLI

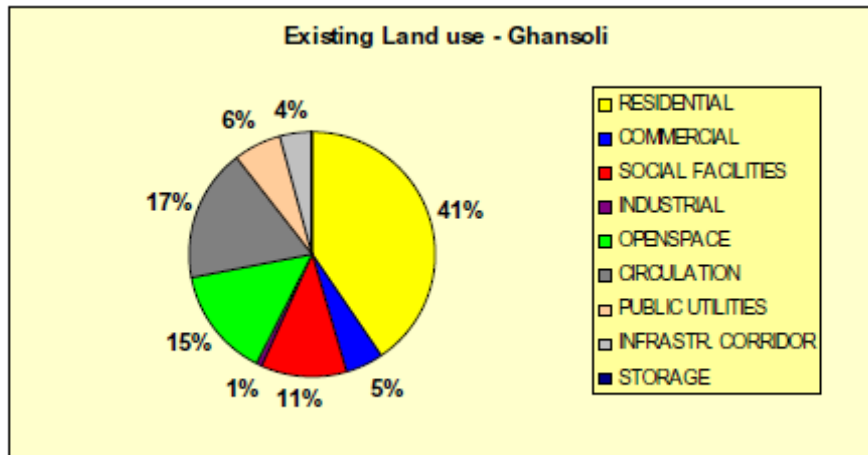
Ghansoli is located in the northern part of NMMC area with Thane Belapur road and Trans-Thane creek Industrial area on the East. It has Trans Thane creek on its western side with Kopar Khairane node and Shil Mahape Road on the south. The total area included in this node is 441.55 ha.

This nodes has two railways stations which include Ghansoli, which is operational and the second is Rabale which is yet to get operational. This node is not handed over to NMMC by CIDCO yet. So development of this node is undertaken very late hence lot of encroachment took place leading slum kind of development with small alleys. In true sense these area not slums, but requires immediate attention and CDP will be applicable to this part.

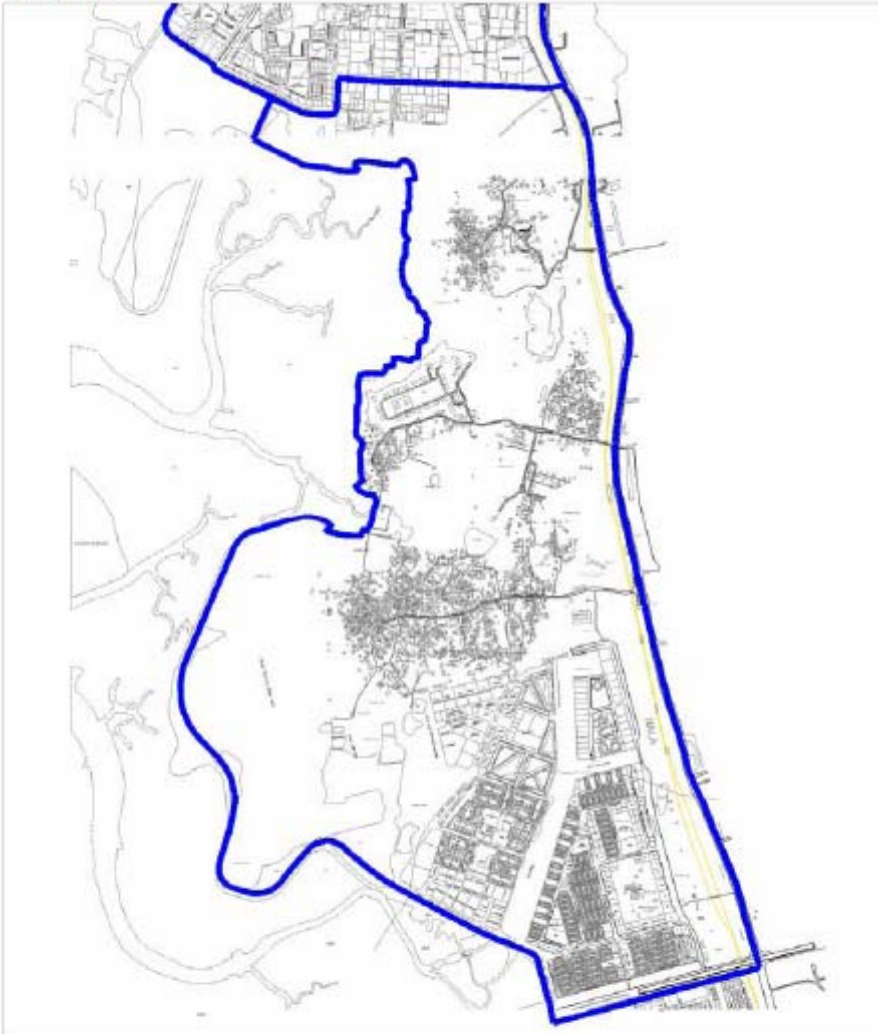
This kind of a development is mainly around existing villages (1) Rabale – Sector 29 (2) Gothivali – Sector 30 (3) Talavali – Sector -22 and (4) Ghansoli – Sector 16. There is also encroachment in sector 17 & 19, 20 and 26 which needs to be treated under redevelopment for urban poor.

Physical infrastructure

CIDCO has prepared master plan and development is in progress. However in some sectors this may not be possible due to the encroachment. The majority of infrastructure like Roads, Storm water drains, Sewer lines, Water line, and street light is being executed in many sectors of this node.



Ghansoli



S No	LAND USE	Area in ha
1	RESIDENTIAL	164.45
2	COMMERCIAL	20.620
3	SOCIAL FACILITIES	45.000
4	INDUSTRIAL	3.050
5	OPEN SPACE	59.220
6	CIRCULATION	70.850
7	PUBLIC UTILITIES	25.820
8	INFRASTR. CORRIDOR	17.150
9	STORAGE	0.000
10	NET DEVELOPABLE AREA	406.16

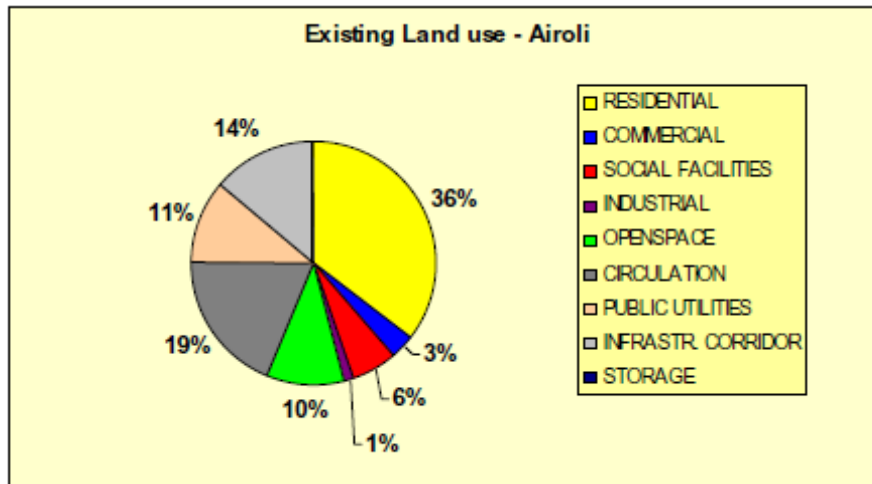
AIROLI

Airoli is developed in 20 sectors. This is connected to Mumbai through Airoli Bridge. This node was developed to cater to the residential demand of industrial areas in Thane Belapur MIDC. This was the area, where the first phase of World Bank aided, BUDP scheme was developed, consisting of 5000 "site and services" units for urban poor. After the opening of Airoli-Mulund Creek Bridge, the development appears as an extension of Mulund or Bhandup Suburb.

The entire node is developed by CIDCO except sector 1 and 1A (encroachment) sector 9 (Diva gaon), sector 20 (Airoli gaon). Under the City development plan the major emphasize will be given to the development of physical infrastructure in the above mentioned four sectors.

Physical infrastructure

- A major junction along Airoli Mulund bridge link road at Sector 9 & 10.
- Roads in sector 1, 1A, 9 & 20, can be proposed not as full sector, but within old settlement only.
- The Station Road parallel to Railway connecting sector 1, 2, 3, 4 & 5 can be widened on East side by taking land from railway reservation to cater the traffic generated due to bus terminus and railway station.
- Check the possibility extending Airoli Mulund Link Road through TTC area by tunnel in Parsik Hill ranges and joining to NH-4 at south side of Mumbra.
- Technical feasibility of the same can be considered in the CDP
- Check the possibility of using old jetty kind of structure created by M/s. Afcon Construction for construction of Airoli Creek Bridge for water transport station.
- Signages for all roads and junction improvements
- Cleaning of holding pond by special permission of Ministry of Environment & Forest Department, Government of Maharashtra.





S No	LAND USE	Area in Ha
1	RESIDENTIAL	133.99
2	COMMERCIAL	11.190
3	SOCIAL FACILITIES	23.740
4	INDUSTRIAL	3.520
5	OPEN SPACE	38.610
6	CIRCULATION	71.430
7	PUBLIC UTILITIES	42.170
8	INFRASTR. CORRIDOR	52.150
9	STORAGE	0.220
10	NET DEVELOPABLE AREA	377.02

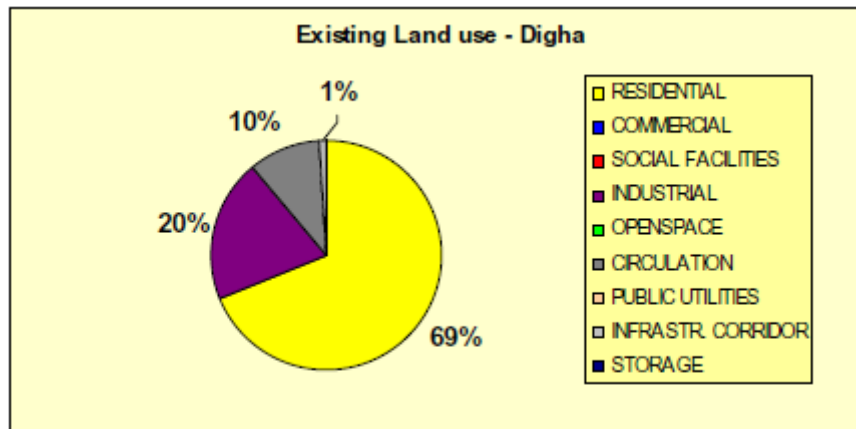
DIGHA

This is the northern most area between Thane Municipal Corporation (TMC) and Airoli Node. The Entire development is (organic) by way of encroachment. Majority structures are of temporary natures and Ground or Gr. +1 structure. Total development is of slum kind. This area has biggest 400 KV receiving station which supplies and distributes power to entire Maharashtra. Because of this, many power corridors are there which has attracted the unauthorized development. There is big water body/pond and adjoining to pond there is a crematorium.

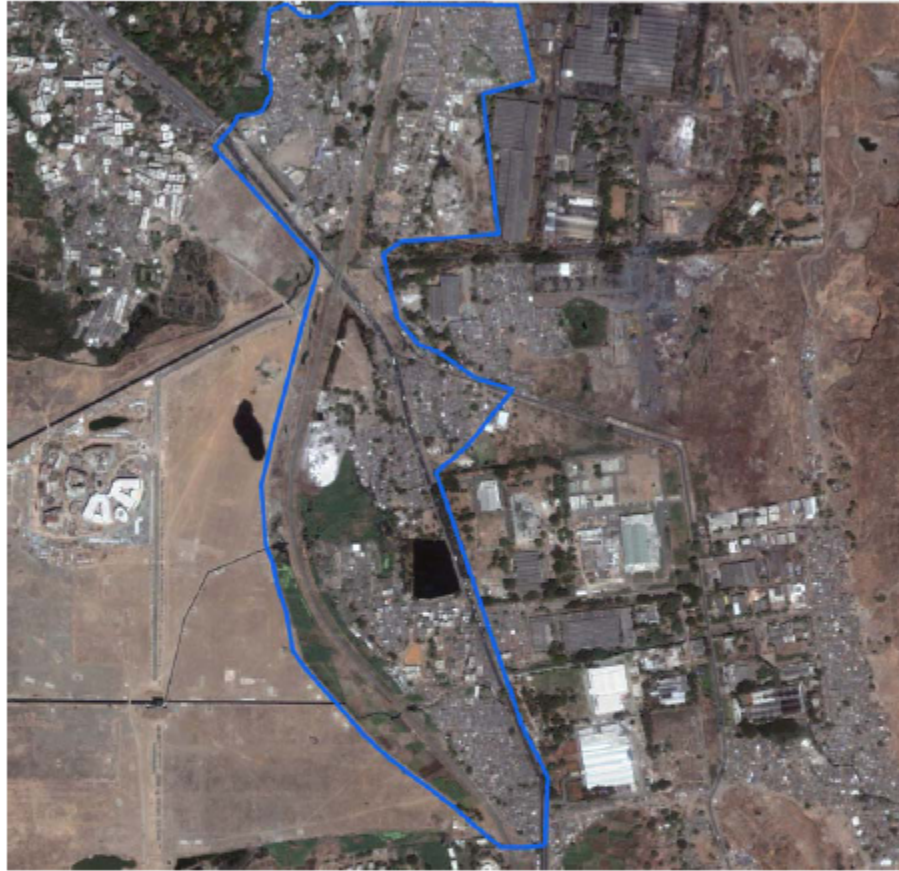
There was a proposal of major flyover starting from this area near to Mukund Iron Company to Kalwa for the diversion of Thane Belapur Road Traffic directing to Kalwa Toll on NH-3. This land is also encroached but this regional link must be executed at any cost due to the heavy traffic jam at Vitava Road under bridge. This work should be done by State Govt or Regional authority.

Physical Infrastructure

- Except one access road, majority of the development is accessed by pathways.
- There is need to develop complete infrastructure.
- In old Digha Gaothan area there are few water connections.



Digha



S No	LAND USE	Area in Ha
1	RESIDENTIAL	1951.26
2	COMMERCIAL	-
3	SOCIAL FACILITIES	-
4	INDUSTRIAL	566.07
5	OPEN SPACE	-
6	CIRCULATION	283.04
7	PUBLIC UTILITIES	-
8	INFRASTR. CORRIDOR	30.00
9	STORAGE	-
10	NET DEVELOPABLE AREA	2830.37

Table 10 NODEWISE EXISTING LAND USE STATEMENT FOR NMMCA AREA

S No	LAND USE	AMBOLI	GIRASSOLI	K. KHARANE	VASOD	SANPADA	NEHEL	IMLAPUR	TIC M.L.B.C.	DEGHA	DAMBAR	TOTAL	%
1	RESIDENTIAL	155.99	164.45	124.78	185.17	85.156	310.61	104.59	60.00	195,236	42.51	3,00,696	30.04
2	COMMERCIAL	11,190	20,020	20,910	39,000	8,575	48,210	85,24	10,000	-	2,260	3,60,633	3.50
3	SOCIAL FACILITIES	23,740	45,000	14,853	53,110	7,481	76,59	33,460	10,000	-	4,135	3,05,584	2.9
4	INDUSTRIAL	3,520	3,050	4,582	9,980	1,775	9,610	0,000	1,668,00	564,07	1,69	2,288,777	21.50
5	OPEN SPACE	28,610	59,220	33,832	92,390	183,77	171,36	141,990	256,000	-	-	81,2479	7.70
6	CIRCULATION	71,410	74,854	42,453	185,850	61,49	241,000	117,910	400,00	203,84	1,849	1,448,352	13.94
7	PUBLIC UTILITIES	42,170	25,820	48,012	98,330	26,629	196,090	9,280	20,000	-	1,84	358,171	3.50
8	INFRASTR. CORRIDOR	53,150	17,150	5,905	71,410	84,234	123,300	123,010	-	3,000	2,663	533,79	5.07
9	STORAGE	0230	0,000	0,000	116,20	0,000	0,000	0,000	45,00	-	-	16,420	1.50
	NOT DEVELOPED										1,075.12	1,075.12	10.20
10	NET DEVELOPABLE AREA	377.42	486.14	315.53	489.42	291.344	1,045.74	615.48	2548.00	2,434.37	1,210.23	1,0524.31	

Note: Infrastructure corridor refers to railway line and gas pipeline corridor

NODE WISE POPULATION SUMMARY AT GLANCE

ANNEXURE II POPULATION GROWTH OF NAVI MUMBAI

2.2 Demography

Existing Population

To review the overall growth of a city, socio-economic indicators play an important role. These indicators give a true picture of the level or standard of living city is offering to inhabitants. Also gives measuring tool to rate city over the surrounding settlements. Below a table has been presented of NMMC area from the year of establishment.

Table 1 Population in NMMC

Year	Total Population	Source
1971	116789	Census
1981	198290	Census
1991	387206	Census
1995	475301	SES CIDCO
2001	703947	Census
2002	726126	UHP Survey
2003	759311	UHP Survey
2004	846100	UHP Survey
2005	875311	UHP Survey
2006	925346	UHP Projection
2011	1402817	Projected
2021	1964951	Projected
2031	2501019	Projected

Population growth:

The decadal population growth rate in NMMC area is 87.5% as per the Census 2001

Table 2 Growth rate of population in NMMC area: A comparison

Category	Decadal Growth Rate (1991-2001)
NMMC area	87.5%
Greater Mumbai	20.68%
Maharashtra	22.73%
India	21.54%

Source: Census 2001

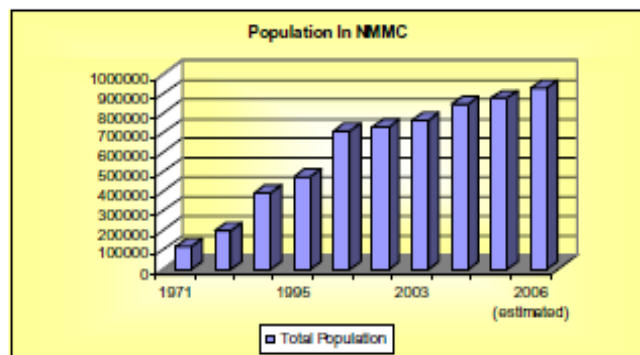
The details on population in various nodes of NMMC are given as below:

Table 3 Population in NMMC area (2001 Census)

	Node	Population in 1991	Population in 2001	Decadal increase %
A	Belapur	38,343	73,069	91
B	Nerul	52,767	1,16,842	121
C	Vashi	74,564	1,11,600	50
D	Turbhe	40,700	1,02,569	152
E	Koparkhairane	49,863	1,04,296	109
F	Ghansoli	23,691	51,632	118
G	Airoli & Digha	97,051	1,31,215	35
H	Dahisar	10,227	12,724	24
	Total	387,206	703,947	87.5

Source: ESR (NMMC), 2003-2004

It is very evident that a major change in the demographic profile has been seen in NMMC area after shifting of industrial hub to NMMC area and projects like JNPT and APMC were initial growth triggers for development in the area. With affordable housing in NMMC area a shift was observed among the people from Greater Mumbai to this part of land. Since the facilities and amenities are worked out for the city from day one, as it is a planned city, so infrastructure was also an attraction for this place which justifies the growth rate which NMMC area has experiences over last two decades.



2.3 Population Density

NMMC area had a population density of 4167 persons per square km.(Census 2001) , 8122 per persons per square km.(As per calculation of Census 2010-11).

2.4 Population projections

Projections provide a base for determining the future needs. Based on past trends and internal and external factors, assumptions are framed and thus population projections are worked out. It is very crucial to determine the growth trends as it gives base data to estimate the Physical and social infrastructure.

2.4.1 Assumptions¹

- a) NMMC area is a fast developing city. Due to the expedition of regional economy and availability of residential areas, a shift has been observed to NMMC area. Based on the following assumptions the population projections for year 2031 have been worked out:
- b) Average of Annual growth rates from 2001 to 2005 is considered for projecting population from 2006 onwards till the nodes attain full development except for Dahisar.
- c) For Belapur population figures from 2002 onwards are projected as per the UHP (Urban Health Post) survey as it is considered to be the latest one. After the nodes attain full development Growth rate of 2% annually is considered (1% as natural growth rate and 1% due to migration on account of proposed airport, proposed SEZ and expansion of sea port and IT parks).
- d) For existing population of various nodes survey data of UHP has been used from year 2002 to 2005.
- e) Exceptional and negative growth rates are not considered for calculating average annual growth rate and are calculated based on Arithmetical Progression Method.

Based on above mentioned assumptions, projections for population have been worked out as below:

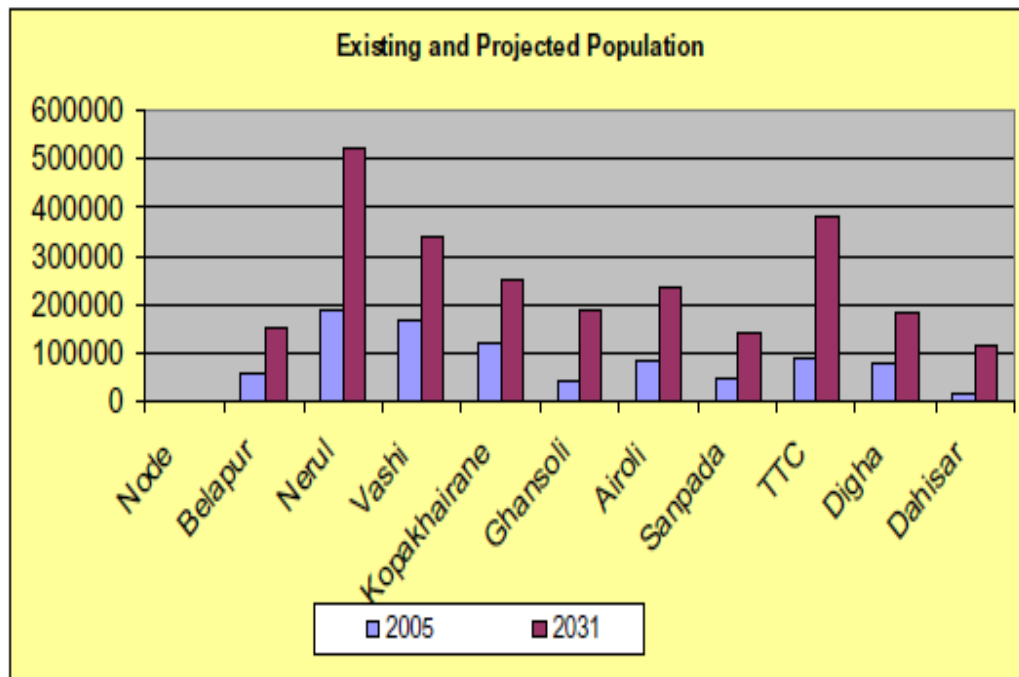
¹Redevelopment of existing properties and redevelopment of slums pockets and other congested areas like gaathan would create space to accommodate the above additional population.

Table 6 Showing population projections in NMMC area

under

Year	Belapur	Nerul	Vashi	Kopar Khairane	Ghansoli	Airoli	Sanpada	TTC	Digha	Dahisar	Total
2005 * (existing)	60805	185850	165921	123870	42968	85370	51837	92401	79474	18289	906785
2006	64101	204122	176142	138166	45660	94792	55429	100566	85511	18837	983326
2010	79169	297017	223721	163544	58214	144106	72466	141126	114622	21201	1315186
2015	103079	380210	247007	180566	78863	173205	101305	215551	133500	24578	1637864
2020	121567	419783	272715	199359	106838	191233	111849	308534	147395	39584	1918857
2025	134220	463474	301100	220109	144735	211136	123490	340647	162736	63750	2165397
2030	148190	511713	332438	243018	180669	233112	136343	376102	179674	102670	2443929
2031	151153	521947	339087	247878	184282	237774	139070	383624	183267	112937	2501019

* Source: UHP Survey of NMMC



TTC, Dahisar Mori area comes MIDC.

ANNEXURE III HOSPITAL

Category	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
No of Private Hospitals	69	75	75	115	125	125
Registered with NMMC	42	53	69	102	122	122
Unregistered	27	22	06	13	03	03
Specialist Doctors	69	---	-	-	-	-
General	38	---	-	-	-	-
Dispensaries (Allopath)	200	231	-	-	-	-
Ayurvedic	125	231	-	-	-	-
Homeopathy	93	231	-	-	-	-
BDS	27	231	-	-	-	-
SU Facility (Hospitals)	10	--	-	-	-	-
Pediatricians	15	--	-	-	-	-
Gynecologists	23	--	-	-	-	06
General	38	--	-	-	-	-
NMMC Hospitals	6	5	5	5	5	5
NMMC Dispensaries	13	13	13	14	14	14
NMMC Mobile Dispensaries	2	1	2	2	2	2
Govt. Hospitals	2	2	-	-	-	1
Private Hospitals – Registered	42	53	69	102	122	123
Private Hospitals – Unregistered	27	22	6	13	3	2
Private Dispensaries	552	231	680	744	744	744
Private Nursing homes	37	11	27	38	40	42

ANNEXURE IV EDUCATIONAL INSTITUTES

Navi Mumbai, strategically located on the proposed Mumbai Pune 'Knowledge Corridor', has been receiving a lot of thrust with respect to Information Technology. The Government of Maharashtra has plans drawn up to develop Mumbai, Navi Mumbai and Pune as high tech habitats for IT Industry.

A strong educational base is the most important pillar on which a person can build a career. A liberal spread of quality educational institutes ensures the availability of learning and gaining knowledge to one and all. Navi Mumbai has been built up with a strong Social Infrastructure. It has 11 Engineering Colleges and 2 Medical Colleges and 62 reputed schools offering high standard education. The Schools and Colleges in Navi Mumbai are equipped with qualified and experienced faculty. Infrastructures for social activities have proved conducive to attract children from even lower income categories.

Navi Mumbai has excellent educational facilities. All kinds of educational institutes are there in Navi Mumbai: kindergardens, schools - both primary and secondary, junior colleges, ITI and Diploma Colleges, Arts, Commerce and Science Colleges, Engineering and Medical Colleges, Management institutes etc. There are 128 primary schools, 80 secondary schools and 25 colleges in MNMC area. During 2003-04 in sector 3 of CBD Belapur a public library building with expenditure Rs. 1.38 Crores was inaugurated and made open to citizens.

Area	Pre- primary	Anganwadi	Primary	Secondary	Colleges	Medical Colleges	Engg. Colleges
Belapur	5	4	5	5	4	-	1
Nerul	17	11	17	15	5	2	1
Vashi	18	3	18	18	4	-	0
Turbhe	15	5	15	15	5	-	0
Kopar khairane	10	4	19	2	2	-	3
Ghansoli	10	13	10	3	1	-	-
Airoli	22	6	22	13	4	-	2
Digha	8	5	8	8	0	-	-
Total	114	51	114	79	25	2	7

Total No of students	NMMC school-23845	Private school-102522
Total No of teachers	NMMC school-510	Private school-1092

ANNEXURE V DIALAPIDATED BUILDINGS

SR. NO.	NODE/WARD	NO.OF DILAPIDATED BUILDINGS	REMARKS
1.	Belapur A	01	
2.	Nerul	06	
3.	Vashi C	23	
4.	Turbhe	06	
5.	Kopar Khairane	01	
6.	Ghansoli	06	
7.	Airoli	04	
8.	Digha	09	

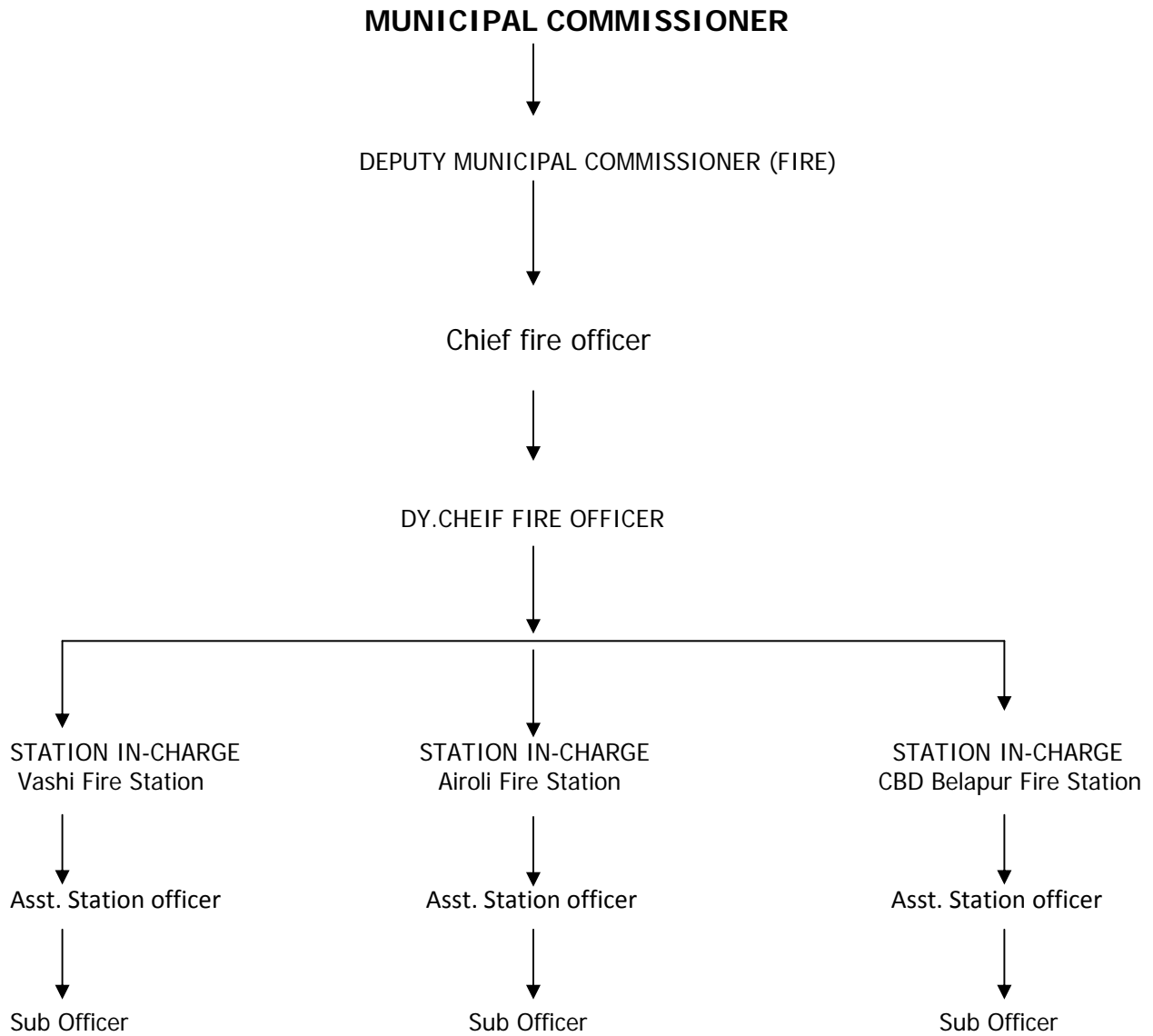
ANNEXURE VI JUGGI ZOPADIS

SR. NO.	NODE/WARD	NO.OF ZUGGI ZOPADIS	REMARKS
1.	Belapur A	784	The total given nos of Juggi Zopadis Are located at 49 odd places in MIDC,CIDCO area.
2.	Nerul	2115	
3.	Vashi C	23	
4.	Turbhe	11754	
5.	Kopar Khairane	1956	
6.	Ghansoli	7018	
7.	Airoli	7825	
8.	Digha	1053	

ANNEXURE VII LOW LINE AREAS

SR. NO.	NODE/WARD	NO.OF LL Areas	REMARKS
1.	Belapur A	02	
2.	Nerul	05	
3.	Vashi C	03	
4.	Turbhe	06	
5.	Kopar Khairane	05	
6.	Ghansoli	04	
7.	Airoli	10	
8.	Digha	12	

ANNEXURE VIII EMERGENCY COMMUNICATION AND COORDINATION



ANNEXURE IX SOP FOR ATTENDING EMERGENCY

