Water distribution, storage layout

&

Water Treatment Plant with potability certificate

Site Plan showing Rain Water Harvesting Pond, Navi Mumbai

MGM INSTITUTE OF HEALTH SCIENCES

(Deemed University u/s 3 of UGC Act, 1956)

Accredited by NAAC with 'A' Grade

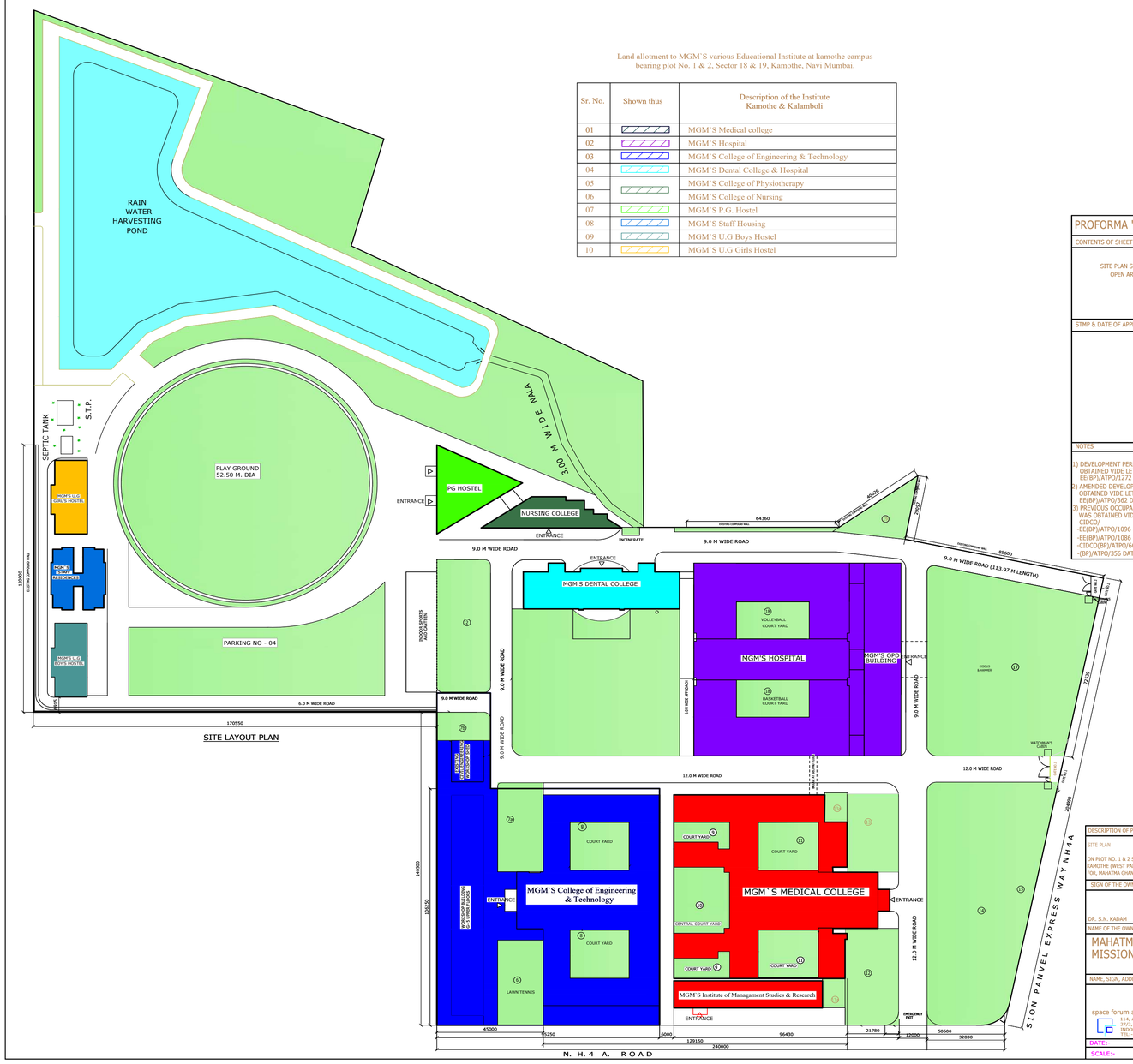
Sector-01, Kamothe, Navi Mumbai - 410 209

Tel 022-27432471, 022-27432994, Fax 022 - 27431094

E-mail : registrar@mgmuhs.com ; Website : www.mgmuhs.com

Land allotment to MGM`S various Educational Institute at kamothe campus bearing plot No. 1 & 2, Sector 18 & 19, Kamothe, Navi Mumbai.

Sr. No.	Shown thus	Description of the Institute Kamothe & Kalamboli
01		MGM`S Medical college
02		MGM`S Hospital
03		MGM`S College of Engineering & Technology
04		MGM`S Dental College & Hospital
05		MGM`S College of Physiotherapy
06		MGM`S College of Nursing
07		MGM`S P.G. Hostel
08		MGM`S Staff Housing
09		MGM`S U.G Boys Hostel
10		MGM`S U.G Girls Hostel



SITE LAYOUT PLAN

Dr. Rajesh B. Goel
Registrar
MGM Institute of Health Sciences
(Deemed University u/s 3 of UGC Act, 1956)
Navi Mumbai- 410 209

PROFORMA 'B'	A-01.5
CONTENTS OF SHEET	

SITE PLAN SHOWING OPEN AREA

STMP & DATE OF APPROVAL OF PLANS

NOTES

1) DEVELOPMENT PERMISSION OBTAINED VIDE LETTER NO. CIDCO EE(BP)/ATPO/1272 ON 7/10/99
2) AMENDED DEVELOPMENT PERMISSION OBTAINED VIDE LETTER NO. CIDCO EE(BP)/ATPO/362 DATED 20/10/2004
3) PREVIOUS OCCUPANCY CERTIFICATE WAS OBTAINED VIDE LETTER NO. CIDCO/
-EE(BP)/ATPO/1096 DATED 06/02/98
-EE(BP)/ATPO/1086 DATED 23/01/02
-CIDCO/BP/ATPO/668 DATED 27/05/04
-(BP)/ATPO/356 DATED 11/03/05

DESCRIPTION OF PROPOSAL & PROPERTY

SITE PLAN

ON PLOT NO. 1 & 2 SECTOR 18 AND 19 KAMOTHE (WEST PANVEL) NAVI MUMBAI FOR, MAHATMA GHANDHI MISSION TRUST

SIGN OF THE OWNERS — NORTH

DR. S.N. KADAM

NAME OF THE OWNERS

MAHATMA GANDHI MISSION TRUST.

NAME, SIGN, ADDRESS OF ARCHITECTS

space forum architects pvt. ltd.
114, ANNIYA PLAZA
27/2, MANDIMAGANJ
INDORE- 452001
TEL:- 0731-2499930

DATE:-	DRG. NO.
SCALE:-	A-01.5

Site Plan showing Bore Well, Pond and STP Line, Navi Mumbai

MGM INSTITUTE OF HEALTH SCIENCES

(Deemed University u/s 3 of UGC Act, 1956)

Accredited by NAAC with 'A' Grade

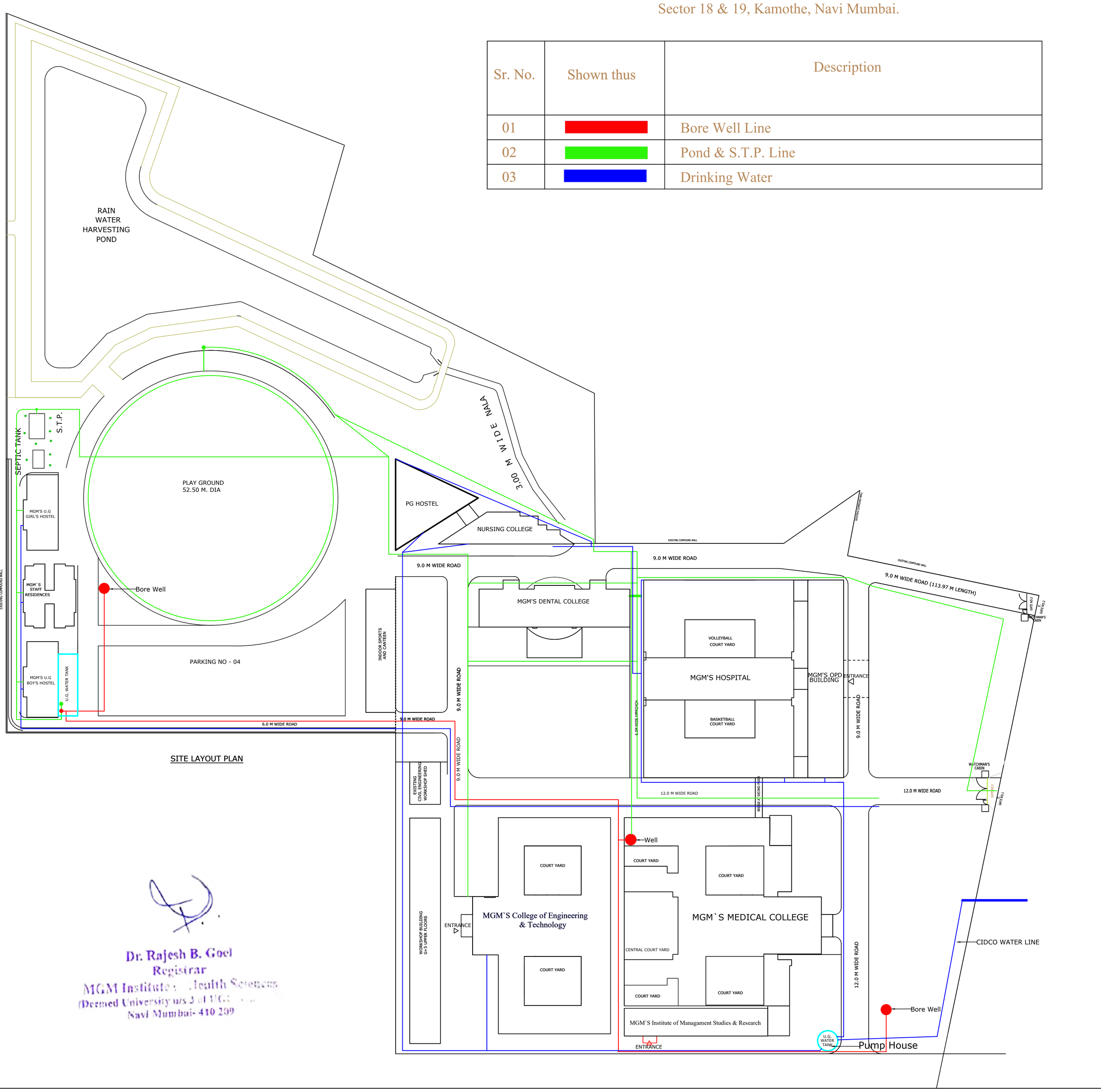
Sector-01, Kamothe, Navi Mumbai - 410 209

Tel 022-27432471, 022-27432994, Fax 022 - 27431094

E-mail : registrar@mgmuhs.com ; Website : www.mgmuhs.com

MGM'S Educational Institute at kamothe campus bearing plot No. 1 & 2, Sector 18 & 19, Kamothe, Navi Mumbai.

Sr. No.	Shown thus	Description
01		Bore Well Line
02		Pond & S.T.P. Line
03		Drinking Water



SITE LAYOUT PLAN

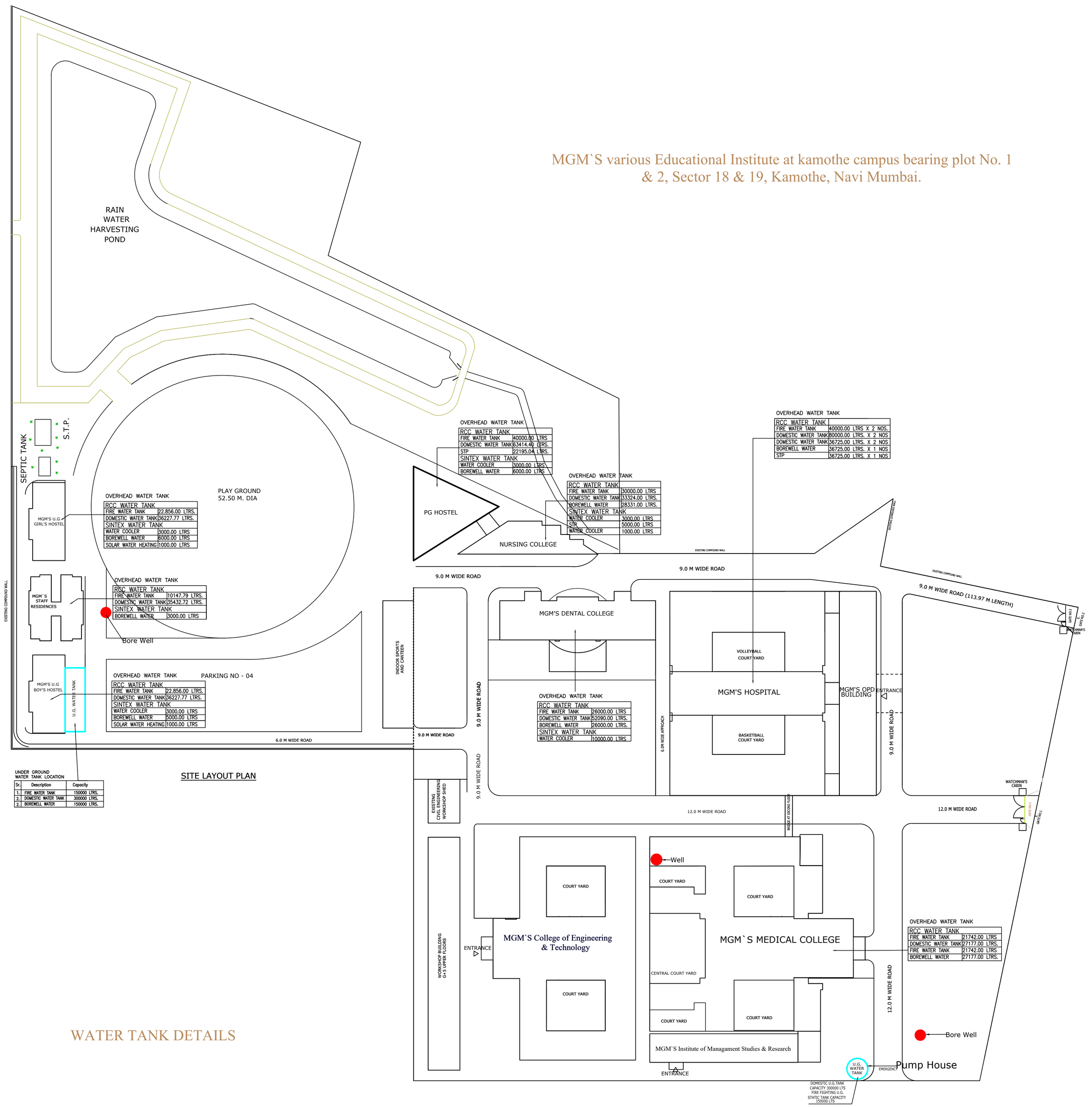
Dr. Rajesh B. Goel
Registrar
MGM Institute of Health Sciences
(Deemed University u/s 3 of UGC Act, 1956)
Navi Mumbai- 410 209

Site Plan showing Water Tank details, Navi Mumbai

MGM INSTITUTE OF HEALTH SCIENCES

(Deemed University u/s 3 of UGC Act, 1956)
Accredited by NAAC with 'A' Grade
Sector-01, Kamothe, Navi Mumbai - 410 209
Tel 022-27432471, 022-27432994, Fax 022 - 27431094
E-mail : registrar@mgmuhs.com ; Website : www.mgmuhs.com

MGM`S various Educational Institute at kamothe campus bearing plot No. 1 & 2, Sector 18 & 19, Kamothe, Navi Mumbai.



OVERHEAD WATER TANK

RCC WATER TANK	
FIRE WATER TANK	22.856.00 LTRS.
DOMESTIC WATER TANK	36227.77 LTRS.
SINTEX WATER TANK	
WATER COOLER	3000.00 LTRS
BOREWELL WATER	6000.00 LTRS
SOLAR WATER HEATING	1000.00 LTRS

OVERHEAD WATER TANK

RCC WATER TANK	
FIRE WATER TANK	10147.79 LTRS.
DOMESTIC WATER TANK	35432.72 LTRS.
SINTEX WATER TANK	
BOREWELL WATER	3000.00 LTRS

OVERHEAD WATER TANK

RCC WATER TANK	
FIRE WATER TANK	22.856.00 LTRS.
DOMESTIC WATER TANK	36227.77 LTRS.
SINTEX WATER TANK	
WATER COOLER	3000.00 LTRS
BOREWELL WATER	5000.00 LTRS
SOLAR WATER HEATING	1000.00 LTRS

UNDER GROUND WATER TANK LOCATION

Sr.	Description	Capacity
1.	FIRE WATER TANK	150000 LTRS.
2.	DOMESTIC WATER TANK	300000 LTRS.
2.	BOREWELL WATER	150000 LTRS.

SITE LAYOUT PLAN

OVERHEAD WATER TANK

RCC WATER TANK	
FIRE WATER TANK	40000.00 LTRS
DOMESTIC WATER TANK	63414.40 LTRS.
STP	22195.04 LTRS.
SINTEX WATER TANK	
WATER COOLER	3000.00 LTRS
BOREWELL WATER	6000.00 LTRS

OVERHEAD WATER TANK

RCC WATER TANK	
FIRE WATER TANK	30000.00 LTRS
DOMESTIC WATER TANK	33324.00 LTRS.
BOREWELL WATER	28331.00 LTRS.
SINTEX WATER TANK	
WATER COOLER	3000.00 LTRS
STP	5000.00 LTRS
WATER COOLER	1000.00 LTRS

OVERHEAD WATER TANK

RCC WATER TANK	
FIRE WATER TANK	40000.00 LTRS X 2 NOS.
DOMESTIC WATER TANK	80000.00 LTRS. X 2 NOS
DOMESTIC WATER TANK	36725.00 LTRS. X 2 NOS
BOREWELL WATER	36725.00 LTRS. X 1 NOS
STP	36725.00 LTRS. X 1 NOS

OVERHEAD WATER TANK

RCC WATER TANK	
FIRE WATER TANK	26000.00 LTRS
DOMESTIC WATER TANK	52090.00 LTRS.
BOREWELL WATER	26000.00 LTRS.
SINTEX WATER TANK	
WATER COOLER	10000.00 LTRS

OVERHEAD WATER TANK

RCC WATER TANK	
FIRE WATER TANK	21742.00 LTRS
DOMESTIC WATER TANK	27177.00 LTRS.
FIRE WATER TANK	21742.00 LTRS
BOREWELL WATER	27177.00 LTRS.

WATER TANK DETAILS

Dr. Rajesh B. Goel
Registrar
MGM Institute of Health Sciences
(Deemed University u/s 3 of UGC Act, 1956)
Navi Mumbai- 410 209

MGM INSTITUTE OF HEALTH SCIENCES
(Deemed University u/s 3 of UGC Act, 1956)
Grade 'A' Accredited by NAAC
Sector-01, Kamothe, Navi Mumbai - 410 209
Tel 022-27432471, 022-27432994, Fax 022 - 27431094
E-mail : registrar@mgmuhs.com | Website : www.mgmuhs.com

MGM'S EDUCATIONAL CAMPUS KAMOTHE, NAVI MUMBAI.

TOTAL WATER REQUIREMENT – 8.00 LACKS LITERS PER DAY		
SOURCES	Capacity	Use
1. From CIDCO	4.5 Lacks	Domestic
2. Bore well & Open Well	1.5 Lacks	Toilet Flushing
3. STP Water	2.0 Lacks	Toilet Flushing & Gardening

- No of Bore wells in Campus - 02 Nos.
- No of Open well in Campus - 1 No.
- No of U.G. Water Tank - 02 Nos. (4.5 Lacks + 6.0 Lacks)
- Cleaning of Tanks - Quarterly (every 3 months)

Flow chart drawing of water distribution

- Domestic water Distribution
- STP Water Distribution
- Bore well & Open well water Distribution

Dr. Rajesh B. Goel
Registrar
MGM Institute of Health Sciences
(Deemed University u/s 3 of UGC Act, 1956)
Navi Mumbai-410 209

Site Plan showing Rain Water Harvesting details, Aurangabad

DRG.NO. - 01C

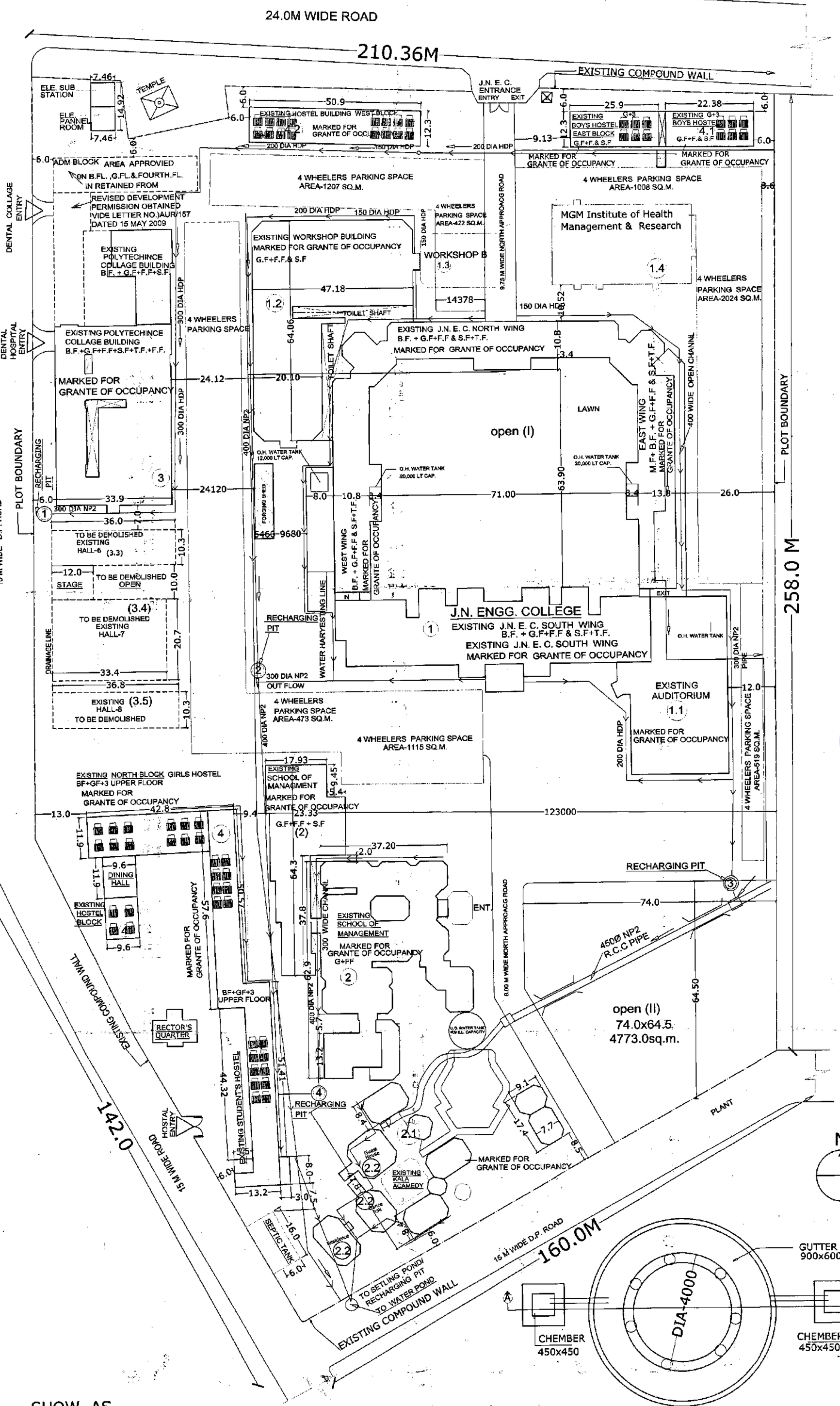
PROFORMA 'B'

CONTENTS OF SHEET

COMPLETIOM PROPOSAL (AS BUILT) SHOWING WATER HARVESTING LAY-OUT PLAN AT MGM EDUATIONAL PLOT

STAMP & DATE OF COMPLETION

Work done Plan are accepted for occupancy certificate is issued vide Letter No. ..... Date 29/05/2015
OC/391/14 2015-16
Assist. Town Planner
Town Planning Department
Municipal Corporation Aurangabad
(O.C. Signed by A.D.T.P.)



SHOW AS

WATER HARVESTING LINE

SURFACE DRAIN CHANNEL
600 WIDEX450 DEEP
LAID TO SLOPE

Dr. Rajesh B. Goel
Registrar
MGM Institute of Health Sciences
(Deemed University u/s 3 of UGC Act)
Navi Mumbai- 410 209

NOTE:
DEVELOPMENT PERMISSION OBTAINED VIDE LETTER NO.BP(EE)AUR/TC/4437 DATED 31 MAY1986

REVISED
DEVELOPMENT PERMISSION OBTAINED VIDE LETTER NO.)AUR/157 DATED 15 MAY2009

DESCRIPTION OF PROPOSAL & PROPERTY

COMPLETION PROPOSAL (AS BUILT DRG.) OF MGM'S JAWAHARLAL NEHRU ENGINEERING COLLEGE, AND ALLIED EDUCTIONAL BUILDINGS ON EDUCATIONAL PLOT, CIDCO TOWN CENTER , AURANGABAD FOR MAHATMA GANDHI MISSION TRUST

NAME OF THE OWNERS

MAHATMA GANDHI MISSION TRUST.

SIGN OF THE OWNERS

NORTH

ER. A. N. KADAM
SECRETARY, MGM

NAME, SIGN, ADDRESS OF ARCHITECTS

S.M. JIVRAG

space forum architects pvt. ltd.
173,nandanvan colony
cantonment, aurangabad - 431002
ph.(0240) -2370113

DATE :MARCH 2013	PROJ. NO.	DRG. NO
SCALE 1:500	MGMH - 04	01C

Rain Water Harvesting Certificate, Aurangabad

space forum architects pvt. ltd.

aurangabad office : 173, nandanvan colony, cantonment, aurangabad-431 002 tel :(0240) 2370113
email : space4rum@yahoo.co.in

CERTIFICATE

CERTIFICATE OF RAIN WATER / SURFACE WATER HARVESTING (RE-CHARGING) AT MGM`S MEDICAL COLLEGE HOSPITALA AND OPD BUILDING AT CIDCO TOWN CENTER, CIDCO, AURANGABAD.

This is to certify that the rain water / surface water harvesting design and execution. Supervision work carried out by our organization and same is completed to our satisfaction, which yielding great positive result and save natural resources as shown in drawing no.

The adopted methodology : The Mgm`s Medical College Hospital campus have 2 ha. Site area having topographic slope towards North and North West side. The same sloping situation / direction utilized for collecting the entire terrace rain water and surface water at lowest ground level. The terrace rain water is collected in built up channels and surface water is also collected through catchment chambers and it is connected to the main channels of 2.0 m. width. The open channels lead towards existing slope and water is recharged in the deep percolation well having 3.0 m. dia and 6.5 m. depth. The campus have two such open wells, both the wells are connected with horizontal bores to equalize the water level during the pumping. The percolated water is stored in another open well of 4000 KL storing capacity.

The store water is reutilized for landscaping, play fields and tropical forest through drip irrigation system.

The open channel excess water is collected in two number of open lakes on two different locations on adjoining property of MGM trust. The lakes are covered with water synthesis / bio-synthesis plant for prevention of atmosphere evaporation. These lakes allow water to recharge in surrounding area to prevent soil erosion and provide organically rich fertile soil for landscape.

This water harvesting system utilized for all 17.5 ha. MGM campus providing perfect ecological balance and oxygen pool to surrounding neighborhood.

The actual resultant of the system is honored appreciation to the trust from His Highness President of India.

S. N. JIVRAG
CA/83/7566

Ar. Shekhar Jivrag
Space Forum Architects Pvt. Ltd.

regd. office : 114, arniya plaza, block-b, 27/2, manoramaganj, indore - 452001 tel : (0731)2494930

Water Treatment Plant with potability certificate

MGM INSTITUTE OF HEALTH SCIENCES

Accredited by NAAC with 'A' Grade
(Deemed University u/s 3 of UGC Act, 1956)
Sector-01, Kamothe, Navi Mumbai - 410 209
Tel 022-27432471, 022-27432994, Fax 022 - 27431094
E-mail : registrar@mgmuhs.com ; Website : www.mgmuhs.com

SALIENT FEATURES OF THE WATER TREATMENT PLANT (WTP) AT MGMIHS Navi Mumbai Campus

A Water Treatment Plant has been established at the Navi Mumbai Campus to treat rain water into potable water and to treat grey water (domestically used water) into potable water during non-monsoon period. The processing capacity is 80 Kilolitres / day on an average. The plant is operational since January 2019 and is delivering potable quality water as indicated in laboratory tests done and reports of government laboratory (PHL).

The WTP installed is unique in many respects and first of its kind in India:

a) Vertically structured plant in which unprocessed water flows mostly by gravity and a pump of only 1.5 HP is used to lift the water within the processing plant. This is a source of enormous saving of life cycle energy cost.

b) The plant has been designed to operate automatically requiring no human intervention in processing thereby standardizing processing parameters and saving manpower costs. Operator task is limited to filling dosing vessels with processing chemicals.

c) The plant does not use Chlorine to disinfect. It uses AOP (Advanced Oxidizing Process), a combination of very high intensity UV radiation with chemical dosing to magnify UV potential in disinfection process.

d) For residual disinfection, the plant uses CLO2 instead of chlorine which does not generate harmful By-products like THM and HAA.

e) The plant is designed to economize space and occupies only 7.5 metres x 11 metres plinth area being vertically extended structure to treat huge volume of 80,000 litres/day.

f) Processing cost is between Rs. 0.03 to Rs. 0.035 per litre to convert grey water into potable quality.

The second plant is now being installed to treat 100 Kilolitres per day at the same site.

The plant has several proprietary components designed and developed by Prof. R. N. Dutt, Technical Consultant at MGMIHS, a former Professor and Dean at Uttarakhand Technical University and also a former UNDP /WB consultant.

Registrar

Dr. Rajesh B. Goel
Registrar
MGM Institute of Health Sciences
(Deemed University u/s 3 of UGC Act, 1956)
Navi Mumbai- 410 209

शा.फो.झि.मु.,पुणे-मी/१२१-(२,००० पुस्तके)-०८-२०१५

महाराष्ट्र राज्य सार्वजनिक आरोग्य सेवा

~~राज्य / प्रादेशिक / जिल्हा~~ नवी मुंबई आरोग्य प्रयोगशाळा, ...कोकण भवन.... दूरध्वनी क्रमांक .....

पाणी नमुन्याचा सूक्ष्मजीवीय अहवाल

प्रति, :-- Dean, M.G.M Medical College & Hospital Kamothe, Navi mumbai

पाठविणाऱ्यांचे पत्र क्रमांक व दिनांक :-- 02.11.19.

प्रयोगशाळा संदर्भ क्रमांक :-- 8630

नमुना घेतल्याचा दिनांक :-- 05.11.19

नमुना पोहचल्याचा दिनांक :-- —"—

परीक्षण सुरू केल्याचा दिनांक :-- —"—

अ. क्र.	नमुन्याचे विवरण	परीक्षणाचे निष्कर्ष			इतर अभिप्राय
		प्रती १०० मि.ली. नमुन्यातील संभाव्य सूक्ष्मजंतूची संख्या			
		कोलीफॉर्म्स	थरमोटॉलरंट कोलीफॉर्म्स	इ. कोलाय	
1)	Water sample from Water treatment plant	0	—	—	potable.

अभिप्राय : पिण्यास अयोग्य पाण्यावर योग्य प्रमाणात क्लोरिनची प्रक्रिया केल्यानंतर व सूक्ष्मजीवीय पुनर्तपासणीनंतर पिण्यास योग्य असल्याची खात्री झाल्यानंतरच ते पाणी पिण्यासाठी वापरता येईल.

अहवाल क्रमांक :2780 दिनांक :-- 08 NOV 2019

अभिप्राय तारेने कळविल्याचा दिनांक :

प्रत सादर :

(१) जिल्हा आरोग्य अधिकारी, जिल्हा परिषद, जिल्हा .....

(२) शल्यचिकित्सक, जिल्हा रुग्णालय, जिल्हा .....

(३) गटविकास अधिकारी, पंचायत समिती .....

कनिष्ठ वैद्यकीय अधिकारी
सार्वजनिक आरोग्य प्रयोगशाळा
कोकण भवन

Dr. Rajesh B. Goel
Registrar
MGM INSTITUTE OF HELATH SCIENCES
(DEEMED UNIVERSITY u/s 3 of UGC Act,1956)
NAVI MUMBAI- 410 209

BMPP-21801-2015-16-50,000 PH401

MUNICIPAL CORPORATION OF GREATER MUMBAI

Public Health Department

It is distinctly understood that this report will not be used for advertisement purposes

MUNICIPAL LABORATORY
Centralised G/North Offices, 2nd Floor, Room No. 49, J. K. Sawant Marg, Dadar, Mumbai-400 028.

ANALYSIS REPORT

Customer Name & Address	**REPORT NO.**	PB/1162 of 2019
Mahatma Gandhi Mission's Medical college Sector 1, Kamothe Navi Mumbai 410209	Sample Id.	MA/19/4527
	Date of Receipt	05.11.2019
	Quantity	250 ml
Sample Description : Drinking Water		
Analysis Started on :- 05.11.2019	Analysis Completed on :- 06.11.2019	

SR. NO.	TEST	RESULTS	ACCEPTABLE LIMITS	METHOD USED
1.	Coliform Bacteria 1 x 100ml	Absent	Shall not be detectable in any 100 ml sample	IS 1622:1981
2.	*E.*coli Bacteria 1 x 100ml	Absent	Shall not be detectable in any 100 ml sample	IS 1622:1981

OPINION : As per referred to the above tests, the sample of Drinking Water conforms to the standards prescribed in IS:10500 of 2012 & hence bacteriologically safe for drinking purpose.

17/11/19

AUTHORISED SIGNATORY
SHRI. M. V. HALDANKAR
Assistant Analyst

Dr. Rajesh B. Goel
Registrar
MGM INSTITUTE OF HELATH SCIENCES
(DEEMED UNIVERSITY u/s 3 of UGC Act,1956)
NAVI MUMBAI- 410 209

BMPP-21801-2015-16-50,000

PH401

MUNICIPAL CORPORATION OF GREATER MUMBAI

Public Health Department

It is distinctly understood that this report will not be used for advertisement purposes

MUNICIPAL LABORATORY
Centralised G/North Offices, 2nd Floor, Room No. 49, J. K. Sawant Marg, Dadar, Mumbai-400 028.

ANALYSIS REPORT

Customer Name & Address	**REPORT NO.**	PC/4656 of 2019
Mahatma Gandhi Mission's Medical college Sector 1, Kamothe Navi Mumbai 410209	Sample Id.	MA/19/4526
	Date of Receipt	05.11.2019
	Quantity	1 lit
Sample Description :- Drinking water		
Analysis Started on :- 06.11.2019	Analysis Completed on :-08.11.2019	

SR. NO.	TEST	RESULTS	ACCEPTABLE LIMITS	METHOD USED
1.	Physical Appearance	Clear	Clear	By visual examination
2.	Odour	Aggreable	Agreeable	IS 3025 Part 05:1983 Reaffirmed 1996
3.	Turbidity	0.97 NTU	Not more than 1.0 NTU	IS 3025 Part 10:1984 Reaffirmed 1996
4.	Dissolved Solids	405.0 mg/lit.	Not more than 500.00 mg/lit.	By TDS Electrode
5.	pH	6.98	6.5 to 8.5	IS 3025 Part 11:1983 Reaffirmed 1996
6.	Total Hardness (As $CaCO_3$)	172.2 mg/lit.	Not more than 200.0 mg/lit.	IS 3025 Part 21:1983 Reaffirmed 2009
7.	Chloride (As Cl)	133.65 mg/lit.	Not more than 250.0 mg/lit.	IS 3025 Part 32:1988 Reaffirmed 1999
8.	Total Alkalinity (As $CaCO_3$)	180.4 mg/lit.	Not more than 200.0 mg/lit.	IS 3025 Part 23:1986 Reaffirmed 1998
9.	Nitrate (As NO_3)	20.0 mg/lit	Not more than 45.0 mg/lit.	By Nitrate Test Kit

OPINION: As per referred to the above tests, the given sample of drinking water conforms to the standards prescribed in IS:10500 of 2012 & hence chemically fit for drinking purpose.

08/11/19

AUTHORISED SIGNATORY

SHRI. M. V. HALDANKAR
Assistant Analyst

Dr. Rajesh B. Goel
Registrar
MGM INSTITUTE OF HELATH SCIENCES
(DEEMED UNIVERSITY u/s 3 of UGC Act,1956)
NAVI MUMBAI- 410 209