MOHAMED SATHAK
A J COLLEGE OF ENGINEERING
34, Rajiv Gandhi Salai (OMR), Siruseri IT Park, Chennai - 603103

CRITERION: 7.1.4

Water conservation Facilities Available in the Institution

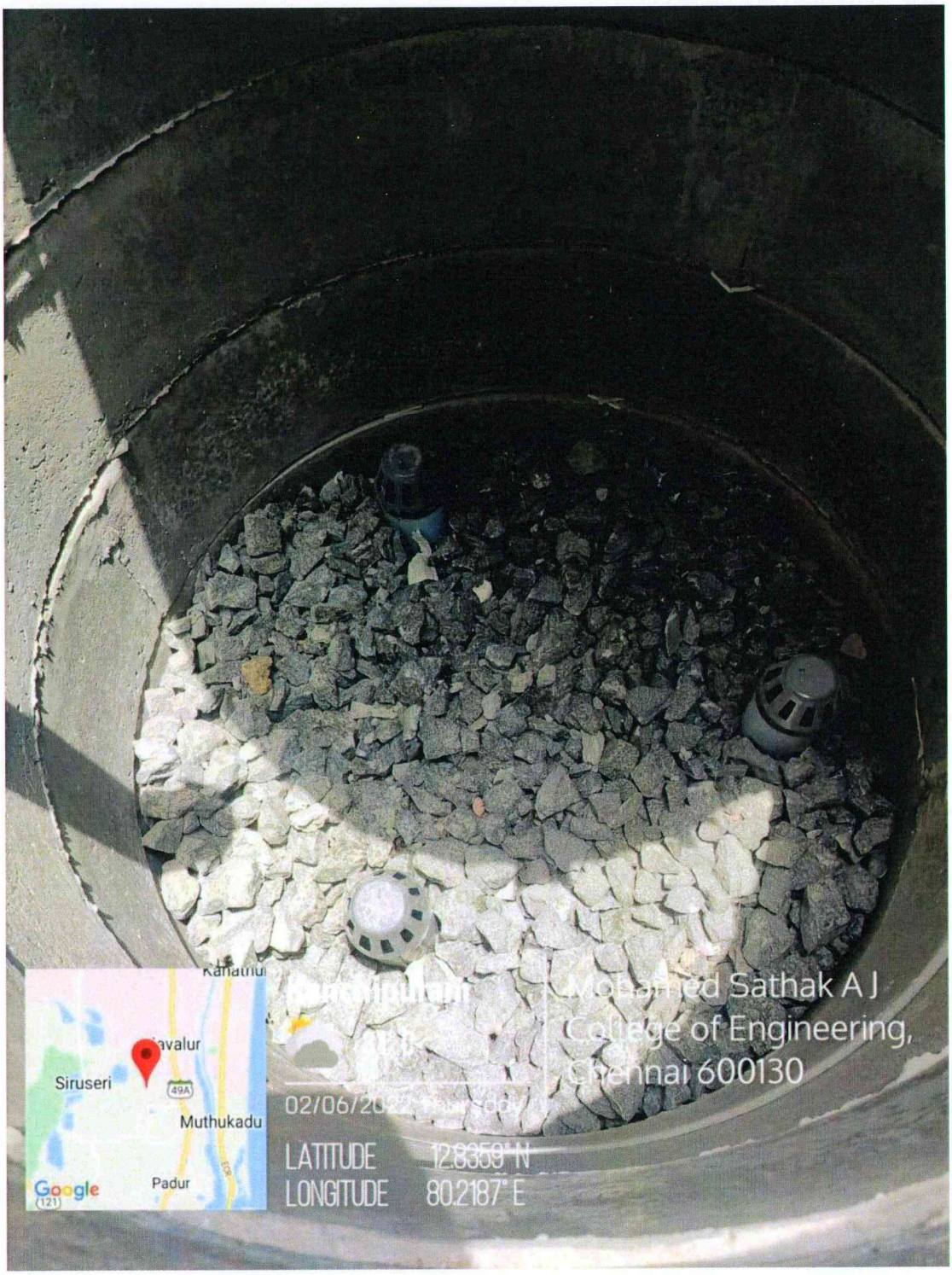
S.No	Department
1	Rain Water Harvesting
2	Borewell/Open Well Recharge
3	Construction of Tanks and Bunds
4	Waste Water Recycling
5	Maintenance of Water Bodies and Distribution System in the Campus

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

1. Rain Water Harvesting

Rain Water Harvesting at Right Side Wing of the Main Building

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.



Rain Water Harvesting at Left Side Wing of the Main Building

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Rain Water Harvesting at Left Side Wing of the Main Building

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34 Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

2. Borewell/Open Well Recharge

For our Institution Water supply to Main Campus Building, Boys Hostel 1&2 and Hostel Mess are provided from the Two Open well Recharge pit Near Workshop and Boys Hostel. Nearly 20,000 to 25,000 liters of water is used every day. In order to recharge the open wells pits were constructed in different Dimensions with coarse gravel for adequate infiltration of water. This helps in increasing the ground water level.

Open Well Recharge System near Workshop

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Open Well Recharge Pits near Boys Hostel

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Bore Well near Workshop

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

3. Construction of Tanks and Bunds

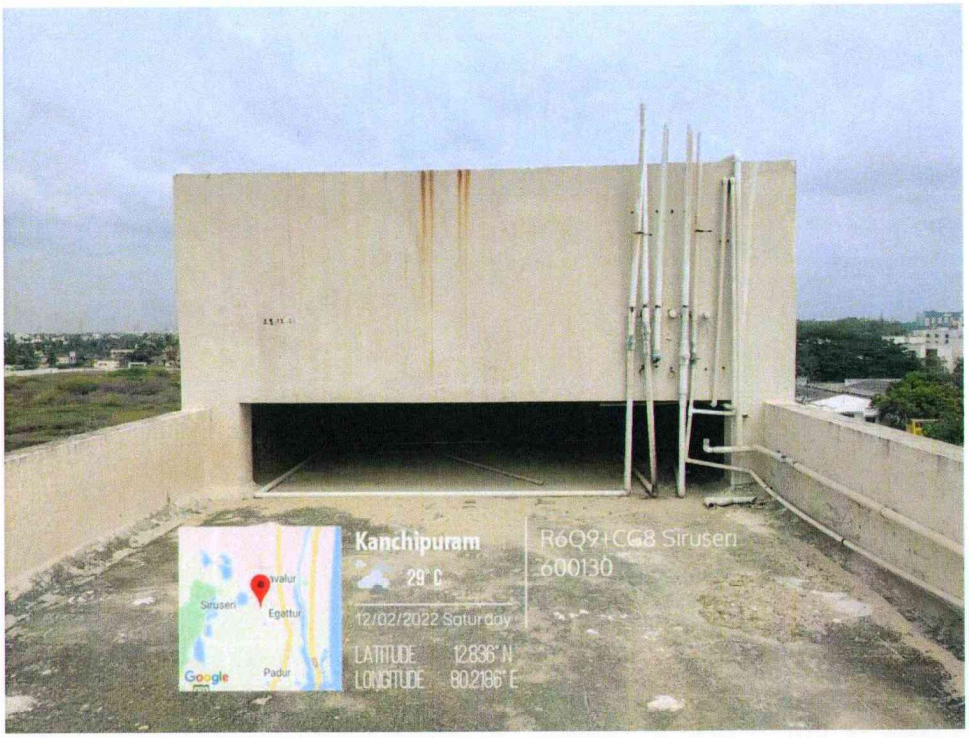
The Institution has built Over head tanks in all the building. The Capacity of the Tank varies for each building. The Institution has 18 overhead tanks, few Sump and Sintex tank in which the Sump tank in Hostel 1 & 2 has the high capacity of 35,000 liters of water. Remaining tanks has the capacity of 22,000 & 5000 liters. Consumption of water changes according to the needs of the People in all these buildings. The Open well is the main source for the total supply of water. Overall Capacity of College Water Tank is 3, 38,500 liters.

Water Tank on Center Main Building

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Water Tank on Right Wing of Main Building

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.



Water Tank on Left Wing of Main Building

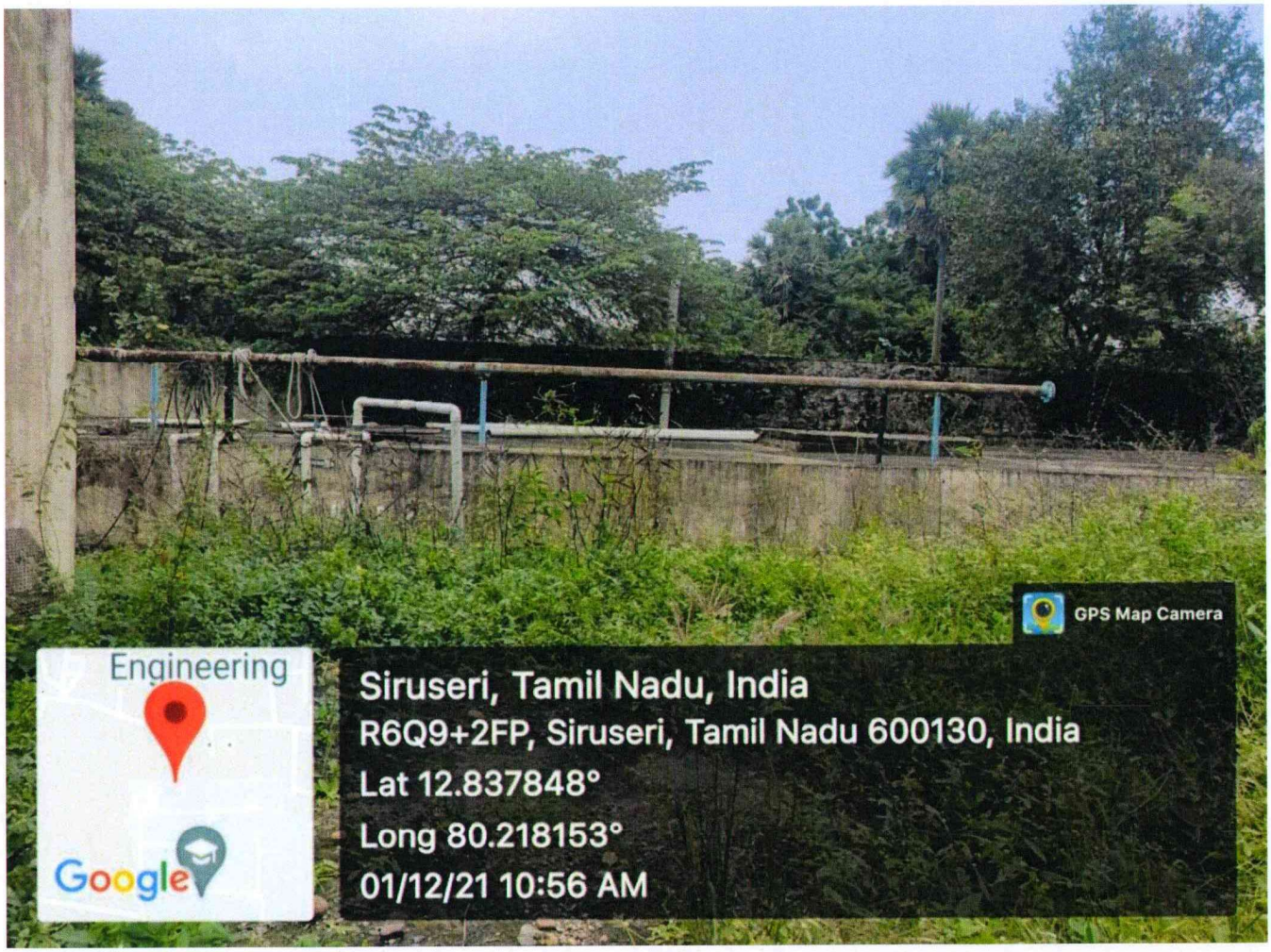
PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

4. Waste Water Recycling

The institution always stresses on the need of saving each and every drop of water. On condition with this, the college has taken initiatives to use the waste water to water the trees. Every day, college needs approximately 10,000 liters of water for the plants. The institution has set up a plant which has the capacity of 25,000 liters of water. The recycling plant does the work of recycling. Approximately 10,000 liters of water recycle every d,ay which comes from the different building and used for the garden.

Sewage Treatment Plant Inside

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.



Sewage Treatment Plant beside Hostel III

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

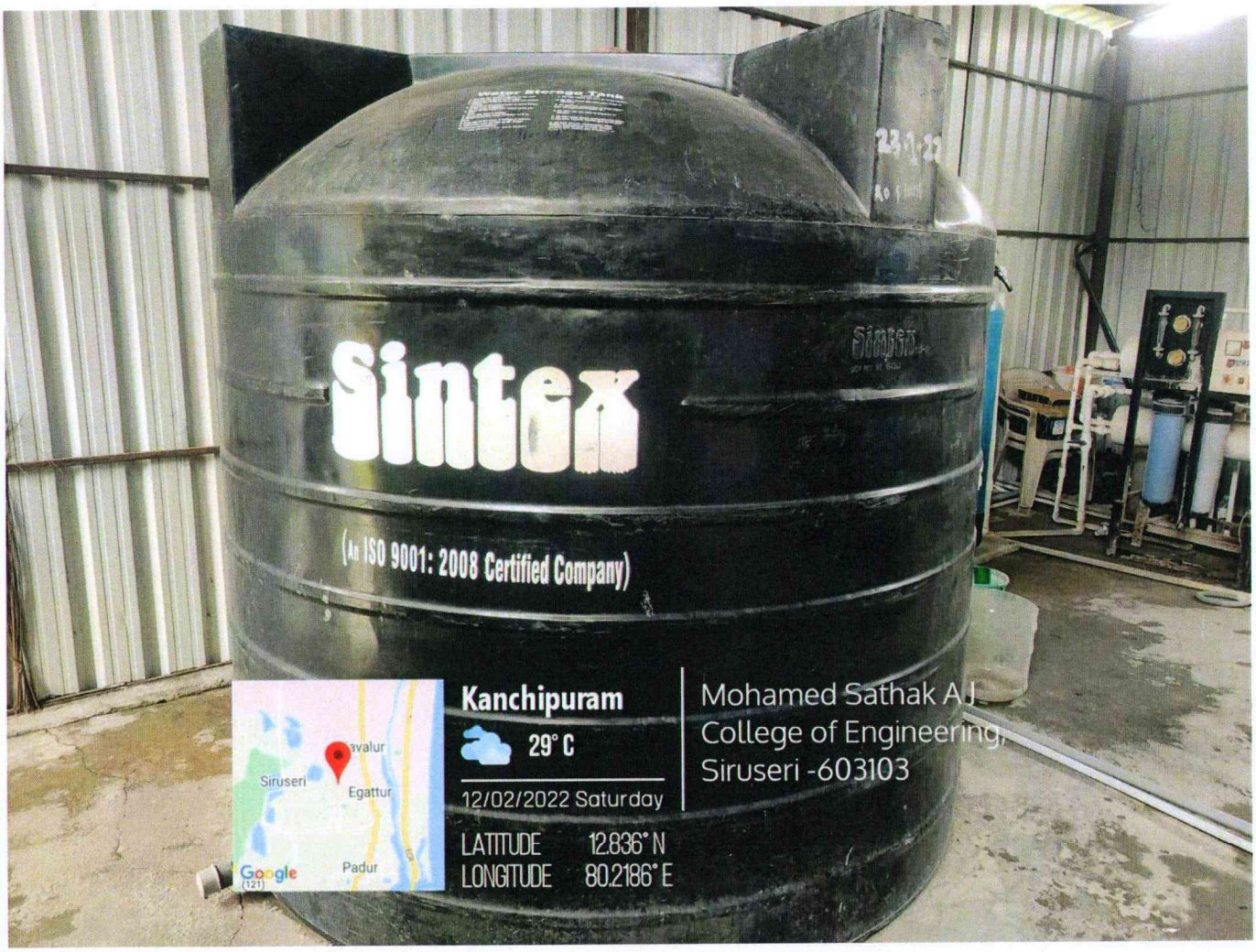
5. Maintenance of Water Bodies and Distribution System in Campus

1. RO Plant in our College

For our Institution RO Water supply to Main Campus Building, Boys Hostel 1&2 and Hostel Mess is provided from the RO plant Near Workshop and Boys Hostel. Nearly 15,000 liters of water is used regularly.

RO Plant near Workshop – Pic 1

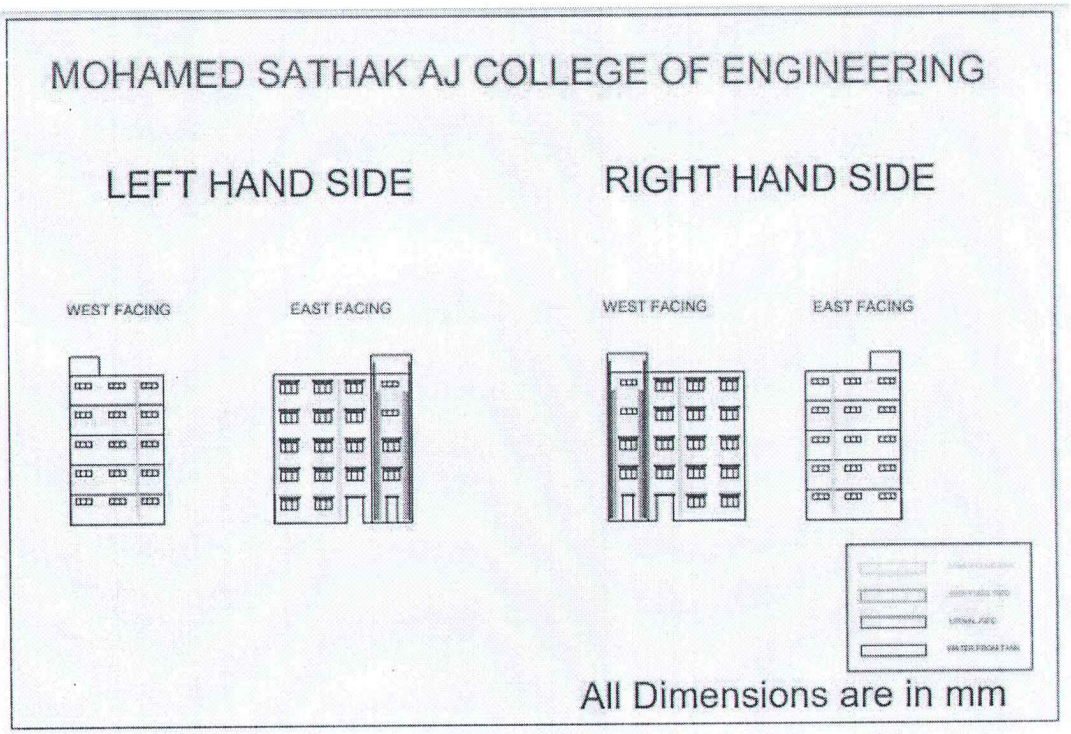
PRINCIPAL
SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

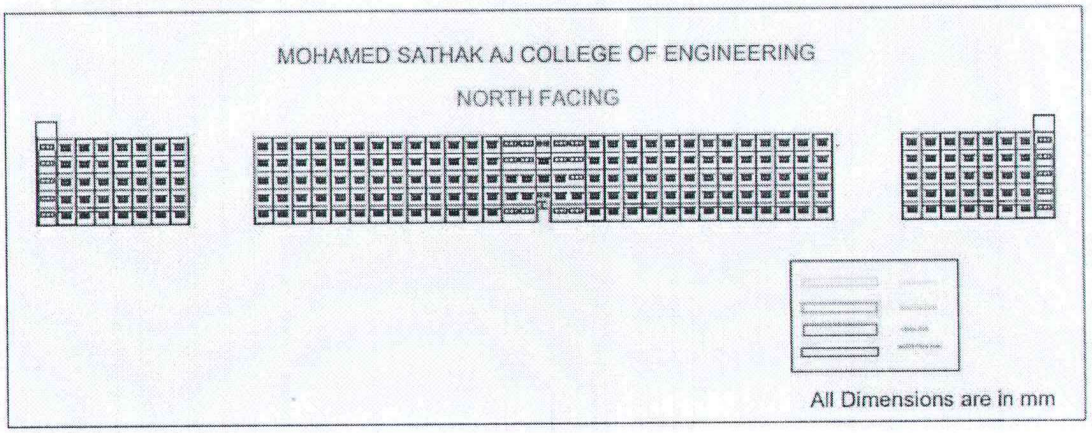


RO Plant near Workshop – Pic 2

PRINCIPAL
SATHAK A.J.COLLEGE OF ENGINEERING
84, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

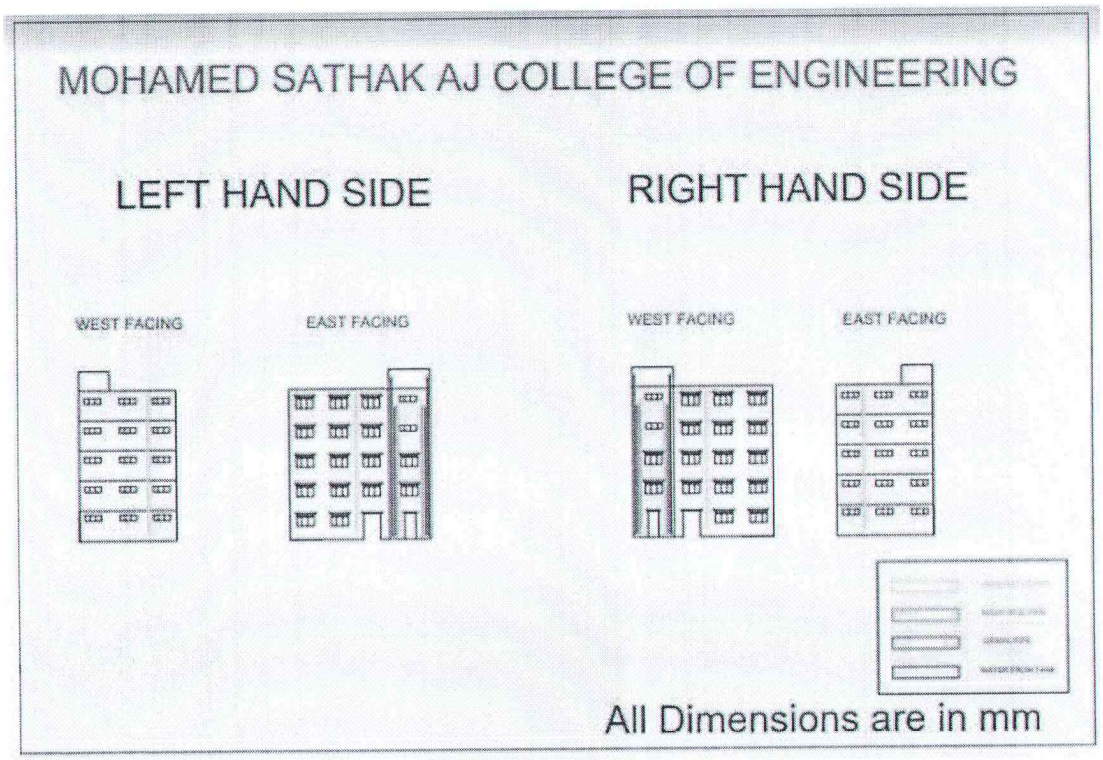
2. Distribution of Water Pipeline in Main Campus





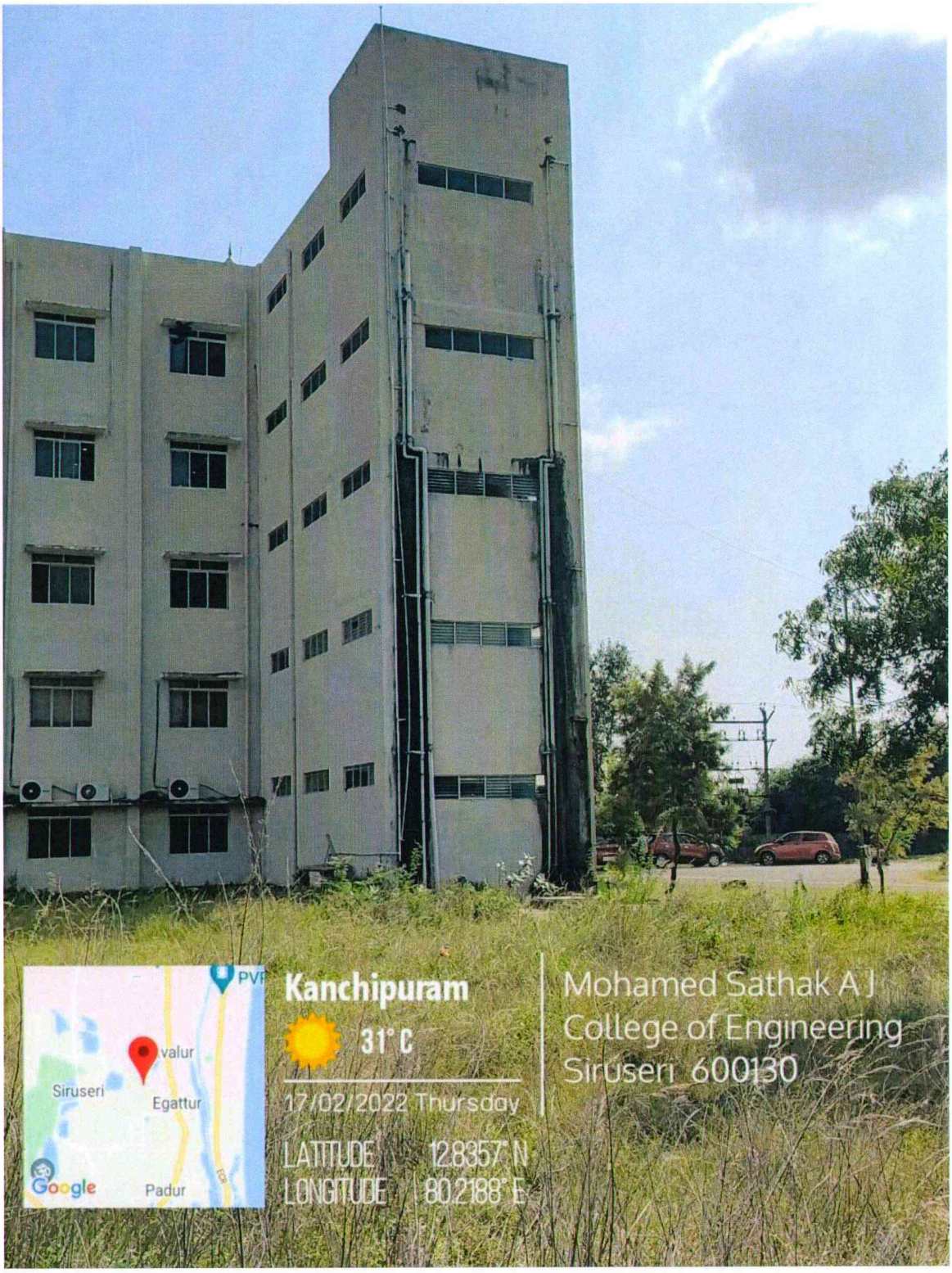
Pictorial Representation of Water Distribution System

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Sirusseri, IT Park
Chennai-603 103.



Pictorial Representation of Water Distribution System

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
...dhi Road (OMR), Siruseri, IT Park
Chennai-603 103.



Water Pipeline of Left wing in Main Building

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Photo of Waste Water to Garden

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

Photo of Waste Water to Garden

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
34, Rajiv Gandhi Road (OMR), Siruseri, IT Park
Chennai-603 103.

GESRA LABS INDIA PVT.LTD.

ACCREDITED BY NABL AS PER ISO/IEC 17025 : 2005

Report No: 211239801

Issued To,
THE PRINCIPAL,
Mohamed sathak A.J.college of Engineering,
siruseri sipcot IT park, OMR,
Chennai-603103, Tamil Nadu.
Ph: +91 - 8610337011

Submitted Sample

Date of Report	:	04.01.2022
Received on	:	29.12.2021
Commenced on	:	29.12.2021
Completed on	:	04.01.2022

Sample Referred by	:	Ram Water Technologies (+91 – 9941033777)
Place of Supply	:	Tamil Nadu
Sample Code No	:	T 21 12 396-01
Sample Name	:	Water Sample
Sample Identification	:	Raw Water

Sl. No	Test Parameters	Unit	Result	Requirement Limit as per IS 10500:2018		Test Method
				Acceptable Limit (Max)	Permissible Limit in the absence of other source (Max)	
I	**Chemical Examination:**					
1	Appearance	--	Clear	--	--	Visual Examination
2	pH @ 25°C	--	7.97	6.5 – 8.5	--	IS 3025 Part 11 1983 RA 2017
3	Colour	Hazen	1.0	5	15	IS 3025 Part 4 2021
4	Odour	--	Agreeable	Agreeable	Agreeable	IS 3025 Part 5 2018
5	Turbidity	NTU	0.10	1	5	IS 3025 Part 10 1984 RA 2017
6	Electrical Conductivity @ 25°C	µS/cm	837	--	--	IS 3025 Part 14 2013 RA 2019
7	Total Suspended Solids	mg/l	Nil	--	--	IS 3025 Part 17 1984 RA 2017
8	Total Dissolved Solids	mg/l	527	500	2000	IS 3025 Part 16 1984 RA 2017
9	Total Hardness as $CaCO_3$	mg/l	315	200	600	IS 3025 Part 21 2009 RA 2019
10	Calcium Hardness as $CaCO_3$	mg/l	233	--	--	IS 3025 Part 40 1991 RA 2019
11	Magnesium Hardness as $CaCO_3$	mg/l	81	--	--	IS 3025 Part 46 1994 RA 2019
12	Calcium as Ca	mg/l	94	75	200	IS 3025 Part 40 1991 RA 2019
13	Magnesium as Mg	mg/l	20	30	100	IS 3025 Part 46 1994 RA 2019
14	Phenolphthalein Alkalinity as $CaCO_3$	mg/l	Nil	--	--	IS 3025 Part 23 1986 RA 2019
15	Total Alkalinity as $CaCO_3$	mg/l	309	200	600	IS 3025 Part 23 1986 RA 2019
16	Chloride as Cl	mg/l	148	250	1000	IS 3025 Part 32 1988 RA 2019
17	Sulphate as SO_4	mg/l	51	200	400	IS 3025 Part 24 1986 RA 2019
18	Total Iron as Fe	mg/l	0.094	0.30	No Relaxation	IS 3025 Part 53 2003 RA 2019
19	Silica as SiO_2	mg/l	31.4	--	--	IS 3025 Part 35 1988 RA 2019
20	Residual Free Chlorine	mg/l	BDL (DL-0.10)	0.2	1.0*	IS 3025 Part 26 2021
21	Carbonate Hardness as $CaCO_3$	mg/l	309	--	--	IS 3025 Part 21 2009 RA 2019
22	Non- Carbonate Hardness as $CaCO_3$	mg/l	6.0	--	--	IS 3025 Part 21 2009 RA 2019
II	**Microbiological Examination:**					
1	Coliform	--	Present	Shall not be detectable in any 100 ml of Sample.		IS 1622 : 1981 RA 2019
2	E.Coli	--	Absent			IS 1622 : 1981 RA 2019

**** End of Report****

* To be applicable only when water is Chlorinated. ; BDL-Below Detection Limit DL-Detection Limit

Remarks: The Submitted Sample of Water does not meet the Chemical requirement of Permissible Limit in the absence of other source as per IS:10500:2018 Drinking Water Specification , with respect to the above tested Parameters.

Verified by

Authorised Signatory

Terms and Conditions

- The Test Results relate only to the items tested.
- This Test Report shall not be reproduced anywhere except in full and in the same format without the written approval of GLIPL.
- The tested items will not be retained for more than 15 days from the date of issue of Test Report unless otherwise agreed with the Customer or as required by the applicable regulations.
- The Laboratory's responsibility under this report is limited to proven willfull negligence and will in no case be more than the invoiced amount.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
Siruseri, IT Park (OMR), Siruseri, IT Park
Chennai-603 103.

RO Water Test Report for Plant 1:

GESRA LABS INDIA PVT. LTD.

ACCREDITED BY NABL AS PER ISO/IEC 17025 : 2005

Report No: 211239901

Issued To,
THE PRINCIPAL,
Mohamed sathak A.J.college of Engineering,
siruseri sipcot IT park, OMR,
Chennai-603103, Tamil Nadu.
Ph: +91 - 8610337011

Submitted Sample

Date of Report	:	04.01.2022
Received on	:	29.12.2021
Commenced on	:	29.12.2021
Completed on	:	04.01.2022

Sample Referred by	:	Ram Water Technologies (+91 – 9941033777)
Place of Supply	:	Tamil Nadu
Sample Code No	:	T 21 12 399-01
Sample Name	:	Water Sample
Sample Identification	:	Treated Water

Sl. No	Test Parameters	Unit	Result	Requirement Limit as per IS 10500:2018		Test Method
				Acceptable Limit (Max)	Permissible Limit in the absence of other source (Max)	
I	Chemical Examination:					
1	Appearance	-	Clear	-	-	Visual Examination
2	pH @ 25°C	-	7.97	6.5 – 8.5	-	IS 3025 Part 11 1983 RA 2017
3	Colour	Hazen	1.0	5	15	IS 3025 Part 4 2021
4	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025 Part 5 2018
5	Turbidity	NTU	0.10	1	5	IS 3025 Part 10 1984 RA 2017
6	Electrical Conductivity @ 25°C	µS/cm	125	-	-	IS 3025 Part 14 2013 RA 2019
7	Total Suspended Solids	mg/l	Nil	-	-	IS 3025 Part 17 1984 RA 2017
8	Total Dissolved Solids	mg/l	81	500	2000	IS 3025 Part 16 1984 RA 2017
9	Total Hardness as $CaCO_3$	mg/l	49	200	600	IS 3025 Part 21 2009 RA 2019
10	Calcium Hardness as $CaCO_3$	mg/l	37	-	-	IS 3025 Part 40 1991 RA 2019
11	Magnesium Hardness as $CaCO_3$	mg/l	12	-	-	IS 3025 Part 46 1994 RA 2019
12	Calcium as Ca	mg/l	15	75	200	IS 3025 Part 40 1991 RA 2019
13	Magnesium as Mg	mg/l	3.0	30	100	IS 3025 Part 46 1994 RA 2019
14	Phenolphthalein Alkalinity as $CaCO_3$	mg/l	Nil	-	-	IS 3025 Part 23 1986 RA 2019
15	Total Alkalinity as $CaCO_3$	mg/l	36	200	600	IS 3025 Part 23 1986 RA 2019
16	Chloride as Cl	mg/l	15	250	1000	IS 3025 Part 32 1988 RA 2019
17	Sulphate as SO_4	mg/l	37	200	400	IS 3025 Part 24 1986 RA 2019
18	Total Iron as Fe	mg/l	BDL (DL-0.02)	0.30	No Relaxation	IS 3025 Part 53 2003 RA 2019
19	Silica as SiO_2	mg/l	BDL (DL-0.05)	-	-	IS 3025 Part 35 1988 RA 2019
20	Residual Free Chlorine	mg/l	BDL (DL-0.10)	0.2	1.0*	IS 3025 Part 26 2021
21	Carbonate Hardness as $CaCO_3$	mg/l	49	-	-	IS 3025 Part 21 2009 RA 2019
22	Non- Carbonate Hardness as $CaCO_3$	mg/l	Absent	-	-	IS 3025 Part 21 2009 RA 2019
II	Microbiological Examination:					
1	Coliform	-	Absent	Shall not be detectable in any 100 ml of Sample.		IS 1622 : 1981 RA 2019
2	E.Coli	-	Absent			IS 1622 : 1981 RA 2019

**** End of Report****

* To be applicable only when water is Chlorinated. ; BDL-Below Detection Limit DL-Detection Limit

Remarks: The Submitted Sample of Water meets the Chemical requirement of Permissible Limit in the absence of other source as per IS:10500:2018 Drinking Water Specification , with respect to the above tested Parameters.

Verified by

Authorised Signatory

Terms and Conditions

- The Test Results relate only to the items tested.
- This Test Report shall not be reproduced anywhere except in full and in the same format without the written approval of GLIPL.
- The tested items will not be retained for more than 15 days from the date of issue of Test Report unless otherwise agreed with the Customer or as required by the applicable regulations.
- The Laboratory's responsibility under this report is limited to proven willfull negligence and will in no case be more than the invoiced amount.

PRINCIPAL
MOHAMED SATHAK A.J.COLLEGE OF ENGINEERING
Old Mahabalipuram Road (OMR), Siruseri, IT Park
Chennai-603 103.

RO Water Test Report for Plant 2