



SOCIETY OF ST. FRANCIS XAVIER, PILAR'S  
**FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING**

(Approved by AICTE & Affiliated to University of Mumbai)

Fr. Agnel Ashram, Bandstand, Bandra (W), Mumbai - 400 050.

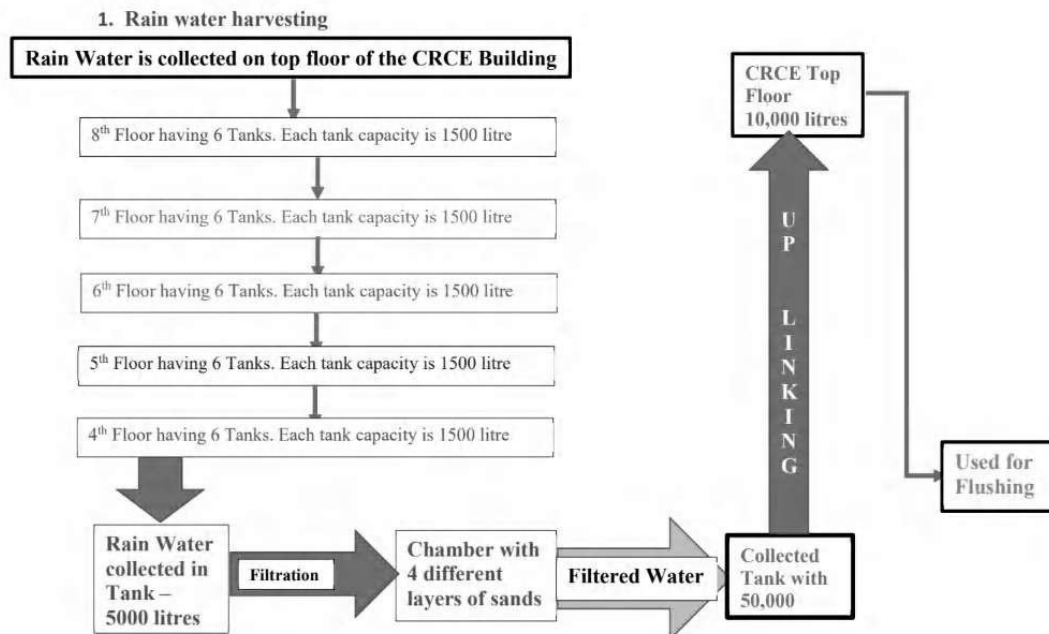
Phone : (022) 6711 4000, 6711 4101, 6711 4104

Website : www.frce.ac.in • Email : crce@fragnel.edu.in

### 7.1.4 Water conservation facility

#### Rainwater Harvesting

The provision of sufficient amount of drinking and sanitation water is a major challenge, due to changes in environmental conditions, for humankind in the near future. Institute has taken proactive steps in this direction by recharging and augmenting groundwater reservoirs. A low-cost solution to this water crisis is employed to solve, though to a limited extent, by collecting and storing rainwater. Rainwater harvesting system is implemented as per the concept and design submitted by Rainwater harvesting consultant. The entire working of the rain water harvesting system implemented in the institute is shown in the following flowchart.



Flowchart of the working of the rain water harvesting system

According to the above flowchart, the rain water is collected in RCC tanks from 8<sup>th</sup> floor to 4<sup>th</sup> floor. This water is then collected in the underground rain water tank of 5000 lits.





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**Underground rain water tank**

The water collected in underground rain water tank is then filtered in the filtration chamber. Sand filter is employed for the treatment of water to remove turbidity, color and microorganisms. The sand filter has four layers where the topmost layer is made up of coarse sand followed by layer of gravel followed by another layer of gravel and boulders. The filtration chamber is shown in the following diagram.





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**Filtration Chamber**

The filtered water is then pumped to rain water harvesting tank on the college terrace with a 10000 lits. capacity.





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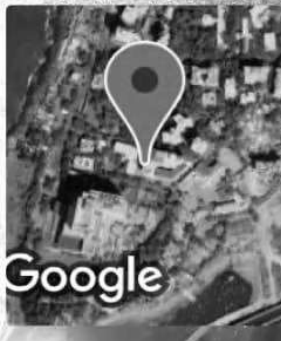
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GPS Map Camera



**Mumbai, Maharashtra, India**

2RVC+R28, Mount Mary, Bandra West,

Mumbai, Maharashtra 400050, India

Lat 19.044435°

Long 72.820237°

25/11/22 01:06 PM GMT +05:30

**Pumping facility to pump filtered water to rain water harvesting tank**





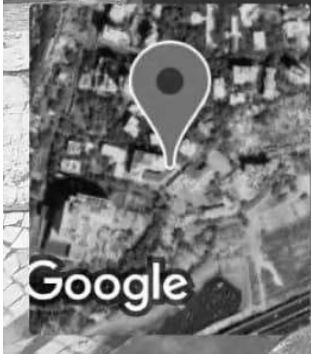
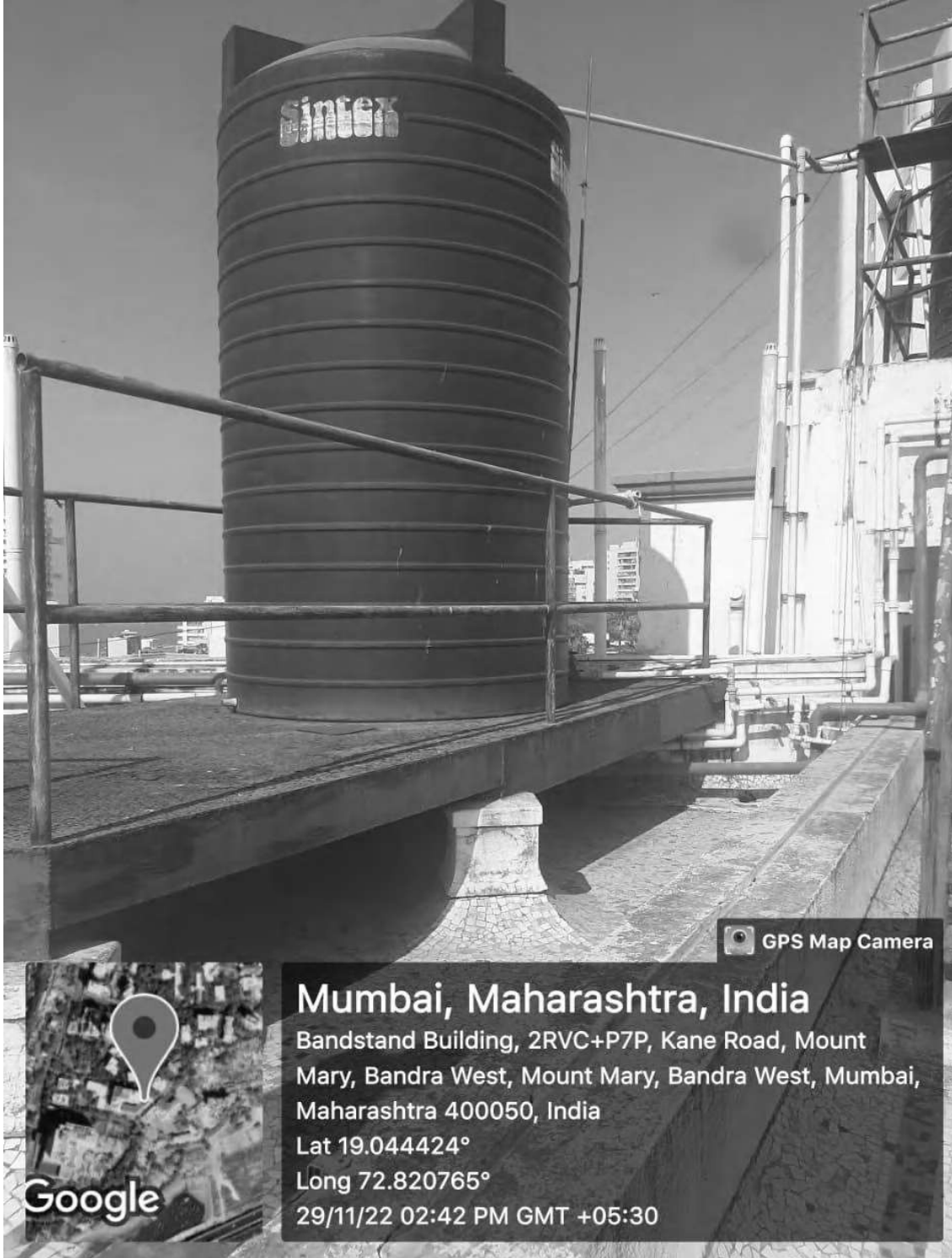
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**Mumbai, Maharashtra, India**

Bandstand Building, 2RVC+P7P, Kane Road, Mount Mary, Bandra West, Mount Mary, Bandra West, Mumbai, Maharashtra 400050, India

Lat 19.044424°

Long 72.820765°

29/11/22 02:42 PM GMT +05:30

**Rain water harvesting tank with capacity of 10000 lits.**





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The water from the rain water harvesting tank is connected to storage tanks of BMC water supply and the water is used for the sanitary purpose.



**Four Water tanks with 15000 lits. capacity**





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**Outlet pipes for rain water harvesting**

*Fr. Agnel*





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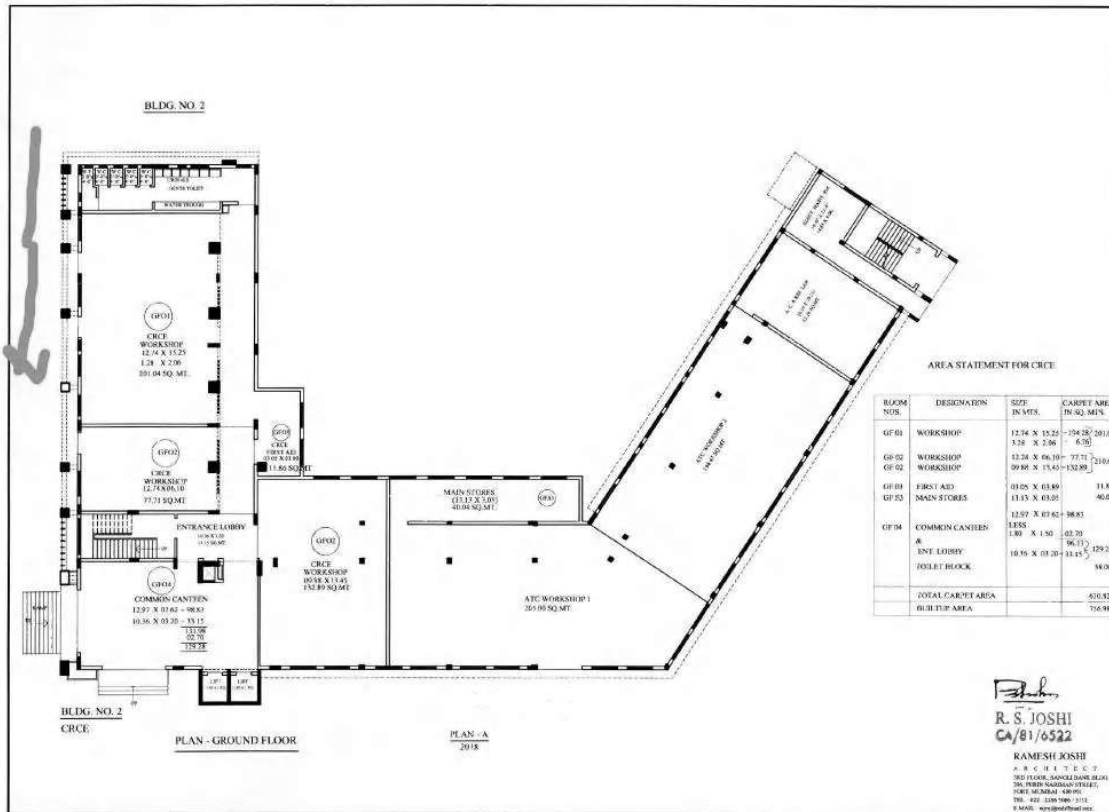
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The floor plan of the college building with rain water harvesting tanks is given below.



**Floor plan with rain water harvesting tanks highlighted**

