

# Green Audit Certificate (As per Green Building Parameters)

The study is conducted as per Indian and International Green Building Standards initiated in the capacity of an Accredited & Certified Green Building Professional

It is awarded for **2021-2022 and 2022-2023** to the Esteemed Institution

(Analysed for 2 years and extended validity for 1 year, thus total 3 years)

The Exhibition Society's

## Sarojini Naidu Vanita Pharmacy Maha Vidyalaya

12-5-31/32, Vijayapuri Colony, Tarnaka, Secunderabad – 500017, Telangana, India

(Site visit held on 07 November 2023)

As part of the Institution's initiatives for a Healthy & Sustainable Institute the audit was conducted. We appreciate the immense efforts taken by Staff and students towards the Efficient Management of Premise.

Issued on **Wednesday, 08 November 2023** and valid till **31 October 2024**

  
**Ar. Nahida Abdulla Shaikh**

"Elite 100 Green Architects of India" Econaur, 2022

Certified Green Building Professional (Registration. No. 22/718)

### Project Head and Green Building Professional-Consultant

Sustainable Academe I Sustainability Department of Greenvio Solutions, Naigaon

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# Environment Audit Certificate *(As per Green Building Parameters)*

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## **Sarojini Naidu Vanita Pharmacy Maha Vidyalaya**

12-5-31/32, Vijayapuri Colony, Tarnaka, Secunderabad – 500017, Telangana, India

*(Site visit held on 07 November 2023)*

As part of the Institution's initiatives for a Healthy & Sustainable Institute the audit was conducted. We appreciate the immense efforts taken by Staff and students towards the Environment Protection and Conservation.

Issued on **Wednesday, 08 November 2023** and valid till **31 October 2024**

*Nahida*  
**Ar. Nahida Abdulla Shaikh**

"Elite 100 Green Architects of India" Econaur, 2022

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# GREEN AUDIT

STUDY PERIOD (TWO YEARS) 2021 – 2022 & 2022 - 2023

Sustainability study  
**AUDIT REPORT**

Studied for  
The Exhibition Society's  
**Sarojini Naidu Vanita  
Pharmacy Maha Vidyalaya**

12-5-31/32, Vijayapuri Colony, Tarnaka,  
Secunderabad – 500017, Telangana, India

**Studied in the capacity of**

**Accredited and Certified**  
Green Building Professional



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Background reference image Sasin Tipchai on unsplash

**Evidence documents for Site visit of external audit team**

Audit team headed by external expert - Ar. Nahida Abdulla  
 Accredited & Certified Green Building Professional, ISO IA (IMS)  
 Audit objective: Green Building up gradation of the premises

Audits covered:  Green audit  Energy audit  Environment audit

Institute: Sarojini Naidu Vanitha pharmacy Mahavidyalaya Date: 7 Nov. 2023

**Document objective: Inferences of the Site visit**

Observations (Positive aspects)	Suggestions (Improvement aspects)
<b>Green Audit</b>	
<ul style="list-style-type: none"> <li>- Water recycling through Air conditioner pipes is practiced</li> <li>- Environmental initiatives taken</li> </ul>	<ul style="list-style-type: none"> <li>- Waste management practices can be improved</li> </ul>
<b>Energy Audit</b>	
<ul style="list-style-type: none"> <li>- Renewable energy systems are utilised to the maximum extent</li> </ul>	<ul style="list-style-type: none"> <li>- Smart energy systems can be adopted.</li> </ul>
<b>Environment Audit</b>	
<ul style="list-style-type: none"> <li>- Good green pockets are available with radiation absorbing plantation cover</li> </ul>	<ul style="list-style-type: none"> <li>- Documentation of reflectance can be done</li> </ul>



Signature & round seal  
 Name: Dr. T. Saritha Tyostna  
 Designation: PRINCIPAL

**For the said Institute**

Sarojini Naidu Vanitha Pharmacy Maha Vidyalya  
 Vijayapuri Colony, 8, Lalaguda, Tarnaka,  
 SECUNDERABAD-509 017.



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 Name: Mrs. F. A. Shaikh  
 Designation: Project Coordinator

**For The Greenvio Solutions**

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Evidence documents for Site visit of external audit team

Audit team headed by external expert - Ar. Nahida Abdulla
Accredited & Certified Green Building Professional, ISO 1A (IMS)
Audit objective: Green Building up gradation of the premises

Audits covered: [x] Green audit [x] Energy audit [x] Environment audit

Institute: Sarojini Naidu Vanitha Pharmacy, Maha Vidyalaya Date: 7 Nov. 2023

Document objective: Proof of the Site visit



Meeting with the core team



Investigation of the systems

Handwritten signature of T. Saritha Tyostna

Signature & round seal

Name: Dr. T. Saritha Tyostna

Designation: PRINCIPAL

For the said Institute

Sarojini Naidu Vanitha Pharmacy Maha Vidyalaya
Vijayapuri Colony, B. Lakshada, Tarnaka,



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Name: Mrs. E. A. Shaikh

Designation: Project Coordinator

For The Greenvio Solutions

# Disclaimer

The Audit Team has prepared this report for **The Exhibition Society's Sarojini Naidu Vanita Pharmacy Maha Vidyalaya** located at 12-5-31/32, Vijayapuri Colony, Tarnaka, Secunderabad – 500017, Telangana, India based on input data submitted by the Institute analysed by the team to the best of their abilities.

The details have been consolidated and thoroughly studied as per the various guidelines for Green Buildings available in National and International Standards; the report has been generated based on comparative analysis of the existing facilities and the prerequisites formulated by various standards. The inputs derived are a result of the inspection and research. These will further enhance and develop a Healthy and Sustainable Institution.

These can be implemented phase wise or as a whole depending on the decision taken by the internal team. The warranty or undertaking, expressed or implied is made and no responsibility is accepted by Audit Team in this report or for any direct or consequential loss arising from any use of the information, statements or forecasts in the report.

The audit is a thorough study based on the inspection and investigation of data collected over a period of time and should not be used for any legal action. This is the property of Greenvio Solutions and should not be copied or regenerated in any form.

The Report is prepared by the Team of Greenvio Solutions under their brand and department – Sustainable Academe as Consultancy firm with the Project Head - Ar. Nahida Shaikh who is as an Accredited and Certified Green Building Professional-Architect. Green Building consultancy is her forte and she is one of the most sought after names when it comes to providing excellent quality services within the stipulated time frame.

The Study is conducted in capacity of Accredited & Certified Green Building Professional with extensive experience.

## Greenvio Solutions

*Developing Healthy and Sustainable Environments*

We are an Environmental and Architectural Design Consultancy firm

Sustainable Academe is our department for conducting Audits

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# Acknowledgement

The Audit Assessment Team extends its appreciation to **The Exhibition Society's Sarojini Naidu Vanita Pharmacy Maha Vidyalaya, Telangana** for assigning this important work of Green Audit. We appreciate the cooperation extended to our team during the entire process.

Our special thanks are extended are due to everyone from the Management.

Our heartfelt thanks are extended to the Chairpersons of the entire process for valuable inputs - **Dr. N. Srinivas**, (Professor & Director) and **Dr. T. Saritha Jyostna**, (Principal).

We are also thankful to Institute's Task force who have played a major role in data collection.

- Faculty members – **Dr. Vivek Sagar** (*Special mention for the excellent coordination*), **Mrs. RVS Latha Sree, Mrs. R. Prashanthi, Mrs. V. Uma and Mrs. G.T. Jyothsna**
- Non-teaching staff members – **Mr. P. Sridhar**
- Admin staff members – **Mrs. S. Navaneetha, Mrs. B. Vanaja, Mrs. S. Neeraja and Mrs. M. Kameswari**

We highly appreciate the assistance of the **entire Teaching, Non-teaching, and Admin staff** for their support while collecting the data.

## Sustainable Academe

Brand of Greenvio Solutions, Palghar District, Maharashtra- 401208

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# 1. Introduction

## 1.1 About the Institute

*Sarojini Naidu Vanita Pharmacy Maha Vidyalaya, sponsored by The Exhibition Society and established as a Women's College. It offers the following courses:*

- ⇒ *B.Pharmacy*
- ⇒ *Pharm D*
- ⇒ *M.Pharmacy (Pharmaceutics)*
- ⇒ *M.Pharmacy (Pharm.Analysis)*
- ⇒ *M.Pharmacy (Pharm.Quality Assurance)*
- ⇒ *M.Pharmacy(Pharmacology)*
- ⇒ *M.Pharmacy(Regulatory Affairs)*
- ⇒ *Pharm D (Post Baccalaureate)*

*The end objective of the endeavor is to provide the best of facilities meeting international standards within the norms of the Government and University recommended fees. structure, to students from moderate backgrounds, to which it is a dream come true.*

*The Institute's students have bagged university ranks at both undergraduate and postgraduate level. The merit percentage has been always 95 plus.*

*Moreover, the first and second Ranks at PGECET-2013 were from the college.*

## 1.2 Statements of the Institute

### 1.2.1 Vision

The Institute proposes "To be an institution of Excellence for Pharmaceutical Education, a leading knowledge and networking platform for young women aspirants to make a change as accountable healthcare professionals – pharmacists and pharmaceutical scientists – engaged in health promotion, disease prevention; assessment, monitoring, initiation and modification of medication usage to assure safe and effective drug therapy regimens."

### 1.2.2 Mission

The Institute adheres and focuses towards - Formidable role for women in pharmaceutical industry, by preparing them for competitive positions at all levels through research-oriented education, extensive training, skill development, talent management, community reach and develop core values of excellence, Innovation, team work, trust and accountability.

- M1: To have qualified students with profound knowledge in various fields of Pharmaceutical sciences to meet the requirements of the Pharmaceutical Industry, Community and Hospital Pharmacy.
- M2: To provide quality pharmaceutical care to the society in a judicious, coordinated and dynamic way and develop ethical and moral attitude to meet the real-world requirements of society.
- M3: Acquire professional skills in making the products and providing services in health care system.

### 1.2.3 Aim

The College has formulated the following aim to achieve its mission:

- To provide outstanding pharmaceutical education and create a prominent knowledge and networking platform for aspiring young women in the field.
- To empower them to become responsible healthcare professionals, specifically pharmacists and pharmaceutical scientists, who play a pivotal role in health promotion, disease prevention, and ensuring the safe and effective use of medications.

### 1.2.4 Objective

It is the objective of the College is

- to empower women to play a significant and competitive role in the pharmaceutical industry and achieve the same through research-focused education, comprehensive training, skill enhancement, talent nurturing, community engagement, and the cultivation of core values such as excellence, innovation, teamwork, trust, and accountability.
- to prepare women to excel at all levels within the pharmaceutical field.

### 1.2.5 Motto

The College channelizes its efforts towards the motto of "We excel."

## 1.3 Assessment of the Institute

### 1.3.1 Affiliations

The technical course provided by the College is affiliated to **a collegiate public state university located in Hyderabad, Telangana, India**. Mir Osman Ali Khan, the 7<sup>th</sup> Nizam of Hyderabad, issued a firman calling for its creation on 29 August 1917.

### 1.3.2 Certification

The College has received the following Certifications

- **AISHE** – The All India Survey of Higher Education code is C-25626.
- **ISO** – The 9001:2015 Quality Management System has been achieved

### 1.3.3 Approvals

The technical courses provided by the College have taken required approvals as follows:

- Approved by **All India Council for Technical Education (AICTE), New Delhi**.
- Approved by **Pharmacy council of India (PCI), New Delhi**.

### 1.3.4 Accreditation

**The Four Year B. Pharm degree program** is accredited by National Board of Accreditation (NBA), Govt. of India.

## 1.4 Facilities of the Institute

*The campus has state of the art infrastructure to supports its endeavours:*

### **INFRASTRUCTURE**

- *13 well-ventilated and spacious classrooms with LCD projector & screen and computer& 5 tutorial rooms with computers and LCD projectors*
- *21 modern modular laboratories with attached preparation rooms having concealed piping for gas, water and drain lines. Convenient faculty rooms are provided.*
- *State-of-the-art equipment is available for preparing simple dosage forms to advanced novel drug delivery systems using rotary tablet machine, coating pan, triple roller mill, colloid mill, Tray dryer, homogenizers & Ultrasonicator.*
- *High-precision analytical instruments are available for analyzing various dugs & their dosage forms using ATR FTIR, HPLC,UV-Visible spectrophotometer, electrophoresis, pH meters among others*
- *Convenient faculty rooms are provided*
- *Computer Laboratory equipped with high end computers and printers for computer practical sessions and preparation for seminars, conferences and presentations. It also has Language Laboratory tool to train students inEnglish language skills.The lab has 80 systems, with the following configurations:*
  - *20 HP Desktops DX 2480 Intel core 2Duo 2.53 Ghz Processor*
  - *20 Dell-Vostro 3800 I3 Processor/4GB/500/DVD/Wi-Fi*
  - *20 Dell Vostro 3800 I5 Processor/4GB/500/DVD/W-iFi*
  - *20 I5 Processor/8 GB RAM/1 TB HDD/256 GB SSD*

## **ANIMAL HOUSE**

- *In compliance with CPCSEA norms, we have established state-of-art animal house facility, in which every student will get hands-on training on animal handling, drug administration and blood withdrawal techniques.*
- *Every M.Pharm dissertation work will be supported with in vivo studies which will enable the research work to be published in peer reviewed journals*

## **VIRTUAL PHARMACY**

- *Virtual Pharmacy was inaugurated by Sri Navin Mittal, IAS, Commissioner of Technical Education, Govt. of Telangana and Prof. C. K. Kokate, former Vice Chancellor K.L.E. Deemed University, former Vice Chancellor Kakatiya University, and former President, Pharmacy Council of India, on 12th July, 2021.*
- *The Virtual Pharmacy facility is first of its kind in the Country as it familiarizes the students with all the logistics of drug store management.*
- *Virtual pharmacy provides real-time order verification, patient counseling in various therapeutic segments and check the drug – drug interactions of the prescriptions*
- *Students learn to perform the role of Pharmacist, vital sign measurements, monitoring and auditing of drug store activities*
- *Virtual pharmacy provides a unique opportunity to know therapeutic segment-wise brand names of drug products and their manufacturers apart from understanding the inventory management principles.*

**LIBRARY**

- *A well-stacked library on the top floor with ample ventilation convenient for effective study/ reading.*
- *It is well spread out over a plinth area of 150 sq. mt.*
- *Houses a reading room, reference section,*
- *Has 1203 titles, 12732 volumes, 24 national and 16 international journals.*
- *The digital library gives student access to E-journals*
- *Internet facility for staff and students.*
- *Can seat 75 students at a time.*

**OTHER FEATURES**

- *An air-conditioned auditorium with a 250 seating capacity and a seminar hall that accommodates a hundred.*
- *Computer Laboratory.*
- *Wi-Fi connectivity*
- *A Board Room.*
- *Girls Common Room*
- *2 lifts and 3 wide stairways*
- *An elegant hallway and a spacious room for Principal and Chairman-cum-Secretary.*
- *Efficiently planned Office and Administrative wing*
- *Attractive facade with glass panelling*
- *30,000 sq. ft. cellar parking*

## 2. Overview

### 2.1 Summarised Populace analysis for 2022-2023

#### 2.1.1 Students data

The data shared by Institute shows there were **589 female students**.

#### 2.1.2 Staff data

S. No.	Type	Male	Female	Total
1	Admin staff	01	08	09
2	Teaching staff	07	50	57
3	Non-Teaching staff	08	24	32
<b>Total Staff Members</b>		<b>16</b>	<b>82</b>	<b>98</b>

*Table 1: Staff data of the Institution for 2022-2023*

The staff data shows the Institute premises had a total of **98 Staff Members**.

### 2.2 Summarised Populace analysis for 2021-2022

#### 2.2.1 Students data

The data shared by Institute shows there were **524 female students**.

#### 2.2.2 Staff data

S. No.	Type	Male	Female	Total
1	Admin staff	01	05	06
2	Teaching staff	03	40	43
3	Non-Teaching staff	07	15	22
<b>Total Staff Members</b>		<b>11</b>	<b>60</b>	<b>71</b>

*Table 2: Staff data of the Institution for 2021-2022*

The staff data shows the Institute premises had a total of **71 Staff Members**.

## **2.3 Site & Institute Building Spread Area**

The Institute is spread over **1 acre** with a built-up area comprising of **1,00,000+ sq. ft.** designed into multiple blocks for educational and residential purposes for a populace of 687 stakeholders (Students and staff members).

## **2.4 Institute Infrastructure**

### **2.4.1 Establishment**

The Institute was established in **1997**.

### **2.4.2 Spatial Organisation**

The Institute is located in a pollution free and healthy environment. The Building is a Reinforced Cement Concrete (RCC) framework building. There are provisions for staircase for accessibility on the premises, whereas there are amenities such as CCTV, a first aid room, etc.

## **2.5 Operation and Maintenance of the premises**

The interview session was held with the staff regarding the operation and working hours. The Institution is open from Monday to Saturday with the timings being 10:00 to 17:00 hours.



## 3. Research

### 3.1 About the Green Building Study Audit

It is a systematic study of the aspects which make the Institution sustainable and healthy premises for its inhabitants.

### 3.2 Analysis of the Green Building Study Audit

The procedure included detailed verification as follows:

- Investigation
- Technical discussion with team
- Observations
- Inferences

### 3.3 Strategy adopted for Green Building Study Audit

The strategies included data collection from the admin department, actual inventory, investigation to check the operation and maintenance, analysis of the data collection, and preparation of the Report.

### 3.4 Activities undertaken for the Green Building Study Audit

- Discussion with the Institute
- Allotment and Initiation by the Institute
- Data collection
- Submission of the files

**Evidence documents for Site visit of external audit team**

Audit team headed by external expert - Ar. Nahida Abdulla  
 Accredited & Certified Green Building Professional, ISO IA (IMS)  
 Audit objective: Green Building up gradation of the premises

Audits covered:  Green audit  Energy audit  Environment audit

Institute: SAROJINI NAIDU VANITA PHARMACY MAHAVIDYALAYA Date: 7 Nov 2023

**Document objective: Induction Meeting attendance sheet**

S. No.	Name	Committee	Designation	Signature
1.	Mrs. F. A. Shaikh	External	Project Coordinator	
2.	Ar. Nahida Abdulla	External	Project Head	
3.	Dr. N. Srinivas	INTERNAL	Professor & Director	
4.	Dr. T. Saritha Jyostna	INTERNAL	Professor & Principal	
5.	Dr. T. Mamatha	INTERNAL	Professor & Vice Principal	
6.	Dr. Vivek Sagar	INTERNAL	Professor & HOD	
7.	Mrs. RVS Latha Devi	INTERNAL	Associate Professor	
8.	Mrs. P. Uma	INTERNAL	Assistant Professor	
9.	Mrs. G.T. Jyostna	INTERNAL	Assistant Professor	

Signature & round seal  
 Name: Dr. T. Saritha Jyostna  
 Designation: PRINCIPAL

For the said Institute  
Sarojini Naidu Vanita Pharmacy Mahavidyalaya  
Vijayapuri Colony, S. Lakuguda, Tamil Nadu  
SECUNDERABAD-505 017



Signature & round seal  
 Name: Mrs. F. A. Shaikh  
 Designation: Project Coordinator

**For The Greenvio Solutions**



**Evidence documents for Site visit of external audit team**

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Institute: SAROJINI NAIDU VANITA PHARMACY MAHA VIDYALAYA Date: 7 NOV 2023

**Document objective: Exit Meeting attendance sheet**

S. No.	Name	Committee	Designation	Signature
1.	Mrs. F. A. Shaikh	External	Project Coordinator	
2.	Ar. Nahida Abdulla	External	Project Head	
3.	Dr. N. SRINIVAS		Professor & Director	
4.	Dr. T. Saritha Tyostna		Professor & Principal	
5.	Dr. T. Mamatha		Professor & Vice-Principal	
6.	Dr. Vivek Sagar		Professor & HOD	
7.	Mrs. R.V.S Latha Sree		Associate Professor	
8.	Mrs. P. Uma		Assitant Professor	
9.	Mrs. G.T. Tyostna		Assistant Professor	

Signature & round seal

Name: Dr. T. Saritha Tyostna

Designation: PRINCIPAL

**For the said Institute**  
Sarojini Naidu Vanita Pharmacy Maha Vidyalaya  
Vijayapuri Colony, S. Lalaguda, Tarnaka,  
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Signature & round seal

Name: Mrs. F. A. Shaikh

Designation: Project Coordinator

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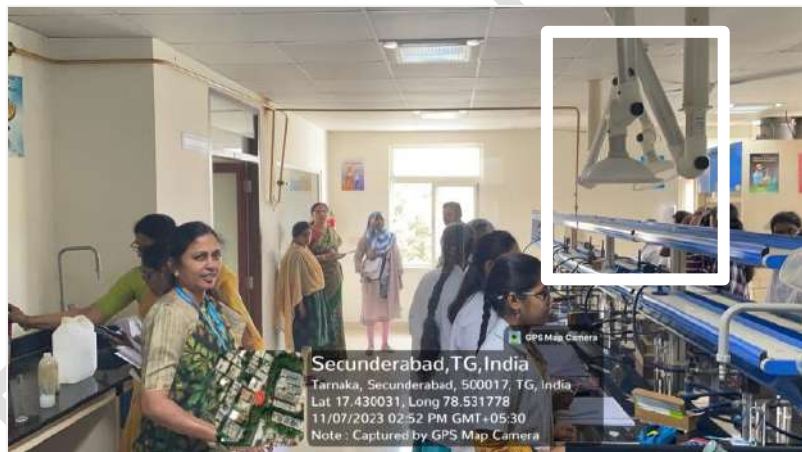


## 4. Observation

A site visit was conducted at the site on **07 November 2023** and the following observations were noted as part of the physical investigation.

The following points were observed during the investigation and are documented for being '**POSITIVE ASPECTS**' that are beneficial to the stakeholder and the campus.

- ➔ Botanical garden
- ➔ Hostel blocks
- ➔ Eco-friendly and cleanliness is really maintained.
- ➔ The special fume exhaust which has been imported shows the deication towards imparting latest state of the art infrastructure.
- ➔ The virtual pharmacy is a unique feature entitled by the Institute



**Plate 1: imported lab equipments for safety purposes**



**Plate 2: Virtual Pharmacy for practical exposure purposes**

## 5. Documentation

### 5.1 Green Practices Audit

The increasing global warming and climate change have made us realise that apart from the enormous strategies the individual small efforts need to be taken by individuals and Educational Institutes as the younger generations are the future of the world and once they are taught about these practices only then can we assume a better future.

#### 5.1.1 Green practices

We observed the following points during the process.

- **Plants as a gift** - *As a kind gesture, the guests visiting the premise are asked to plant a small sapling on the premise itself, this is a special feature adopted by the Institute.*
- **Social awareness** - *The Institute has taken up awareness drives on various social issues for rural upliftment and regeneration in the Institute and surrounding villages.*
- **Cleanliness Campaign** - *The Swachha Bharat Abhiyan is carried out on Institute premises as well as off-premises.*
- **Silent and peaceful atmosphere** – *The Institute is located amidst residential areas which are well designed thus these help to maintain the pollution under control and provide a healthy ambience.*
- **Universal design** – *The Institute premises has special provisions such as ramps, lifts for the specially abled.*
- **Team work** – *The best quality of the Institute which sets it apart from other institutes is its coordinating and cooperative staff members, as for a building the foundation plays the most important role for its future similarly for an educational institute its staff members do.*
- **Signages on the plants mentioning scientific names** - *The practice of having the names of each plant and tree is executed by the Institute and is very beneficial.*
- **Hygiene committee** - *The Institute has a hygiene committee which undertakes multiple programs and necessary actions towards the maintenance of cleanliness in the premises.*

- **Multiple clubs** – *The Institute has multiple clubs that undertakes a lot of initiatives.*
- **Documentation of all the events** – *The best part about the Institute is the prompt and professional response, this was observed not only in the way the Team responded throughout the project but also through the documented data submitted be it the cleanliness report or the eco club activities report; each of these were documented and presented in a sophisticated manner which is highly appreciating.*

### 5.1.2 Community development

The details of **extension initiatives** under various heads in Institute are documented below:

S. No.	Type	Coordinator Name	Since
1	National Service Scheme (NSS)	Dr. Pranitha	2 years

*Table 3: Details of the extension initiatives by the Institute*

The following activities are undertaken as environmental and social initiative.

- Haritha haram for tree plantation.
- Health awareness campaigns
- Social and medical aid distribution

## 5.2 Waste Audit

Waste is an inevitable part of our lives. Over the years the awareness about waste management techniques has given a rise to rethink how the waste can be avoided being sent to the landfills.

The audit provides an approximation of the types of waste generated, location of waste collections, disposal techniques used, waste segregation methodologies adopted. It provides realistic inputs about the waste management strategies that are implemented in addition to the newer ways that can be adopted aiming to make the premise clean and sustainable.

### 5.2.1 Waste produced

S. No.	Type of waste	Source	Current Disposal	Can be retreated?	Methodology
1	Solid waste	Toilets– Biodegradable waste	Soak pit connected for solid-liquid waste management	Yes	TREATED – Biogas plant can be initiated
2	Liquid waste	Toilets, washbasins	Let into storm water drain	Yes	TREATED – Water treatment plant can be initiated
3	Paper waste	Newspaper and other paper	Given to vendor	Yes	TREATED – A recycling plant can be initiated
4	E-waste	Computers - Non-biodegradable waste		Yes	CONTINUE with the current practice
5	Plastic waste	Bottles, wrappers		Yes	
6	Dry waste in form of leaves	Open space & plantations, papers - Non biodegradable waste	Handed over to local municipal corporation	Yes	TREATED – Dedicated zone where - composting is undertaken
7	Organic regular waste	Dust, dirt dust waste from indoor spaces			
8	Bio-waste	Sanitary waste	Not practiced	Yes	Install sanitary vending machine

*Table 4: Details of the waste management practices adopted by the team*

There are 147 nos. of dustbins in the indoor and 2 nos. of dustbins in the outdoor areas.

## 5.3 Water Audit

Water is one of the basic needs. Pure drinking water is a resource that needs to be preserved efficiently. A water audit helps to identify the sources of water consumption, and the water requirement by the premises is met by these sources.

The effective usage of water without any wastage should be a mandatory practice. Understanding the techniques as per site context to increase water conservation in terms of awareness and practice can be identified and executed as part of this exercise.

### 5.3.1 Areas of water supply

#### 5.3.1.1 Source of Primary water supply

The Institute requires water from the Local Municipality for drinking water purposes. There are dedicated water tanks available in the premises.

S. No.	Type	Capacity (litres)	Nos.
1	Underground	1,25,000	1
2	Overhead	12,500	1
3	Fire tank	12,500	1

Table 5: Details of the water facilities in the premises

#### Observation:

The rooftop areas with water tanks were kept clean, however information about size, capacity, usage and maintenance date can be painted on the tanks.



Plate 3: Water tanks on the rooftop and investigation of the same



### 5.3.1.2 Source of Secondary water supply

The Institute uses the following sources of water supply for secondary usages such as watering plants, kitchen, toilets, and wash basins and other spaces. There are 2 bore wells with a depth of 1,100 feet available in the premises.

### 5.3.1.3 Source of Tertiary water supply

The tertiary source of water is the source of water harvesting; the project at present is under process with consultancy with certain vendors under process.



#### Observation:

The highlighted pipes are rooftop terrace pipes that have scope for rain water harvesting.

There could be trench (rain water bund) about 1 feet deep that could be constructed from these pipes to the borewell located at the entrance of the campus.

In this manner, ground water recharging can be practiced keeping the site context in mind.

**Plate 4: Rain Water Harvesting Phase pipes in the campus**

### 5.3.1.4 Source of Reusing waste water

This initiative is not practiced, however it can be thought about in the next few years.

However, there is a waste water huge collection area available in the cellar area as follows:

#### Observation:

The spaces should be redesigned as a sewage treatment plant



*Plate 5: Waste water collection area in the cellar area*

### 5.3.2 Areas of water usage

Based on inventory done - data shared it was found that premise has following facilities:

- General toilets
- Toilets for the disabled
- Wash basins and Taps
- Water tanks

#### Observation:

The pits can be painted with information about type and number

Eg: Water pit No. 1



*Plate 6: Pits related to water usage*

## 5.4 Health and Hygiene Audit

The hygiene is a part and parcel of our daily life. It is extremely essential to keep the surroundings clean in the same manner as we would want our houses to be.

Educational Institutes have a bigger role to play in order to affect the young minds in the positive manner through better hygienic practices.

### 5.4.1 Facilities available

The Institution has washroom facility, hand wash, drinking water and dustbin facilities.

### 5.4.2 Hygiene aspects

There was no major hygiene issue observed anywhere in the premises.

Only the waste water collection tank area in the cellar requires major upgradation.

### 5.4.3 Special aspects

There is availability of a doctor room in the premises.

## 6. Investigation

The following results are based on the investigation carried out during the site visit.



*Figure 1: Energy and environmental parameters investigation study*

The comfort levels as per investigation were good.

## 7. Exhortation

### 7.1 Site suggestions

The following suggestions are to be considered as a ***first priority*** and should be **executed within the next 1.5 to 2.5 years from the date of the Report submission**. The Institute can execute a plan after discussion with Project Head.

S. No.	Space	Comment	Action to be taken
1.	Water tanks on rooftop and underground	Kept clean, owever documentation missing	Information such as: <ul style="list-style-type: none"> <li>➤ Size</li> <li>➤ Capacity</li> <li>➤ Usage</li> <li>➤ Maintenance date</li> </ul> Should be present on all the tanks
2.	Rain water pipes	Should be redesigned	<ul style="list-style-type: none"> <li>➤ Paint the pipe in light blue and mention as 'Rain water pipe'</li> <li>➤ Costruct a trench that get connected to the borewell and practice ground water recharging</li> <li>➤ Put a display board with information about the system</li> </ul>
3.	Water collection area in the basement	Requires a major upgrdataion owing to hygiene related concerns	Undertake a sewage treatment plant
4.	Computer Labs	Documentation	All the laboratory areas that have computer appliances in major nos. should have E-waste management chart

**Table 6: Site suggestions**

## 7.2 Section-wise suggestions

The following suggestions are ***not an urgent priority*** and **can be executed in 5 years from the date of the Report submission.**

### 7.2.1 Green practices Audit

- ➔ **Environmental awareness** - There can be various slogans in local and national language on the compound wall giving the message of saving the environment through the joint efforts of the students and staff thereby making the student socially and environmentally responsible citizens.
- ➔ **Tree adoption scheme in the premises** - The Institute can adopt the One Faculty – One tree adoption scheme; this can be practiced on occasions such as toppers meet, guest sapling plantations, specific zoning of the tree adoption area. this can be very beneficial, especially during the summer season.
- ➔ **No vehicle day** - Once in a while, a No vehicle day can be adopted by students and staff to promote the use of eco-friendly vehicles on the premise.
- ➔ **Signages on the plants mentioning scientific names** - The practice of having the names of each plant and tree will provide awareness among the staff and students.
- ➔ **Increase the green awareness practice** – This should be in terms of the physical and virtual events which will be beneficial for all stakeholders in the shared premises. (Basically the frequency of the lectures should be increased)
- ➔ **Increase the organic farming practices** - The premises can have an organic farming facility in terms of farms, kitchen, terrace gardens the produce can be directly utilised in the premises.

## 7.2.2 Waste Audit

- ➔ **Incinerators** - The Incinerators should be installed in Girl's toilets for disposal of sanitary napkins
- ➔ **Twin Dual Litter Dustbin Bins** - There should be more number of dual litter dustbins at various locations in areas such as Canteen, and open spaces. This would inculcate the awareness of waste segregation among students.
- ➔ **Signages** - Messages about avoiding wastage should be placed at appropriate locations.
- ➔ **Dustbins at every 100m** - There should be a dustbin at every 50-100m in open spaces
- ➔ **Material of dustbin** - The plastic dustbins should be replaced with eco-friendly material.
- ➔ **Include better plastic/ E-waste management measures** - The Institute can celebrate one day of every month as a 'Plastic/ E-waste awareness day' The stakeholders (Students and staff members) can be asked to bring plastic/ E-waste which can be further given to an NGO for recycling or better purpose.
- ➔ **Organic compost pit maintenance methodology** - The Institute can recheck the current methodology as it can yield better results in terms of quantity if it is well maintained with the following strategies:
  - The sanitary pad incineration dust can be sent to the compost pit
  - There should be a balance of brown and green waste material
  - Shred the materials before adding them to pit
  - Add twigs
  - Stir occasionally
  - Add water in less quantity to avoid the smell
  - Keep ample air circulation to avoid the smell
  - Regular monitoring and maintenance.
- ➔ Tie up with **Bisleri International regarding their 'Bottles for change program'** also with **'Thereco'** for their waste management.
- ➔ Invite companies such as **'Thaely'** and **'Recharkha'** to undertake skill development workshops.

### 7.2.3 Water Audit

- **Wastewater from toilets** - This should be collected and a wastewater treatment plant can be installed in the open space wherein this water can be treated and reused for gardening and toilet flushing.
- **Signages** - Messages about avoiding water wastage should be placed at appropriate locations.
- **Rain water bunds** – There should be landscape beautification project undertaken to appropriate channelize the rain water through bunds and similar facilities.

### 7.2.4 Health and Hygiene Audit

- **Courtyards and duct areas** – These are located in the internal and setback should have vertical gardens for beautification.
- **Sanitary vending and incinerator** - There should be provision for sanitary vending, incinerator machine and incinerator in every ladies common room, and toilet on the premises.
- **Signboards** – The Institute should have multiple signboards about 'No smoking' and 'Healthy premises' at every nook and corner of the Institute.
- **Compound wall** – The compound wall should have awareness messages about 'No Smoking' and 'No Tobacco'



**On-site investigation and physical verification**  
 Audit Team during the visit and other photos collected during data documentation



Meeting and group photo with the team



On-site investigation parameters – Cellar, Office, Laboratories and Library areas



Seminar on 'Trash to treasure' to the stakeholders

## 8. Compilation

The study is based on the data collected, analyzed, rechecked, and confirmed through multiple modes. For the quality study, some standards/ notes have been referred to. These are listed and noted below. However, no direct references have been used anywhere. These are used as a base to analyze and study the data collected.

- ➔ Uniform Plumbing Code – India, 2008
- ➔ IGBC Green Existing Buildings – Operation & Maintenance (O&M) Rating system, Pilot version, Abridged Reference Guide, April 2013
- ➔ IGBC Green Landscape Rating system, March 2013
- ➔ BOMA Canada Waste Auditing Guide, Best Environmental Standards, BOMA BEST – Canada
- ➔ Used only for understanding Universal design - Universal Accessibility Guidelines for Pedestrian, Non-motorized vehicle and Public Transport Infrastructure – Report guidelines by Samarthyam (National center for Accessible Environments) – an initiative supported by Shakti Sustainable Energy Foundation and [www.umassd.edu](http://www.umassd.edu)
- ➔ The city of Cheyenne, Streetscape/ Urban Design elements - Wyoming Planning Association, Gillette, Wyoming, United States
- ➔ Images on site by Coordinators of the both teams
- ➔ Icon images used by <https://www.vecteezy.com/free-vector/security-camera-icon> and <https://www.vecteezy.com/free-vector/electric-car-icon>



# ENVIRONMENT AUDIT

STUDY PERIOD (TWO YEARS) 2021 – 2022 & 2022 - 2023

Sustainability study  
**AUDIT REPORT**

**Studied for**

The Exhibition Society's

**Sarojini Naidu Vanita**

**Pharmacy Maha Vidyalaya**

12-5-31/32, Vijayapuri Colony, Tarnaka,  
Secunderabad – 500017, Telangana, India

**Studied in the capacity of**

**Accredited and Certified**

Green Building Professional



**Studied by**

**Greenvio**  
Solutions

Website: <https://thegreenviosolutions.co.in/>

Email: [greenviosolutions@gmail.com](mailto:greenviosolutions@gmail.com)

**Evidence documents for Site visit of external audit team**

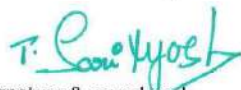
Audit team headed by external expert - Ar. Nahida Abdulla  
 Accredited & Certified Green Building Professional, ISO IA (IMS)  
 Audit objective: Green Building up gradation of the premises

Audits covered:  Green audit  Energy audit  Environment audit

Institute: Sarojini Naidu Vanitha pharmacy Mahavidyalaya Date: 7 Nov. 2023

**Document objective: Inferences of the Site visit**

Observations (Positive aspects)	Suggestions (Improvement aspects)
<b>Green Audit</b>	
<ul style="list-style-type: none"> <li>- Water recycling through Air conditioner pipes is practiced</li> <li>- Environmental initiatives taken</li> </ul>	<ul style="list-style-type: none"> <li>- Waste management practices can be improved</li> </ul>
<b>Energy Audit</b>	
<ul style="list-style-type: none"> <li>- Renewable energy systems are utilised to the maximum extent</li> </ul>	<ul style="list-style-type: none"> <li>- Smart energy systems can be adopted.</li> </ul>
<b>Environment Audit</b>	
<ul style="list-style-type: none"> <li>- Good green pockets are available with radiation absorbing plantation cover</li> </ul>	<ul style="list-style-type: none"> <li>- Documentation of reflectance can be done</li> </ul>



Signature & round seal  
 Name: Dr. T. Saritha Tyostna  
 Designation: PRINCIPAL

**For the said Institute**

Sarojini Naidu Vanitha Pharmacy Maha Vidyalya  
 Vijayapuri Colony, 8, Lalaguda, Tarnaka,  
 SECUNDERABAD-509 017.



Signature & round seal  
 Name: Mrs. F. A. Shaikh  
 Designation: Project Coordinator

**For The Greenvio Solutions**

Website: [thegreenviosolutions.co.in](http://thegreenviosolutions.co.in) Email: [greenviosolutions@gmail.com](mailto:greenviosolutions@gmail.com)



Evidence documents for Site visit of external audit team

Audit team headed by external expert - Ar. Nahida Abdulla
Accredited & Certified Green Building Professional, ISO 1A (IMS)
Audit objective: Green Building up gradation of the premises

Audits covered: [x] Green audit [x] Energy audit [x] Environment audit

Institute: Sarojini Naidu Vanitha Pharmacy, Maha Vidyalaya Date: 7 Nov. 2023

Document objective: Proof of the Site visit



Meeting with the core team



Investigation of the systems

Handwritten signature of T. Saritha Tyostna

Signature & round seal

Name: Dr. T. Saritha Tyostna

Designation: PRINCIPAL

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Name: Mrs. E. A. Shaikh

Designation: Project Coordinator

For The Greenvio Solutions

# Disclaimer

The Audit Team has prepared this report for **The Exhibition Society's Sarojini Naidu Vanita Pharmacy Maha Vidyalaya** located at 12-5-31/32, Vijayapuri Colony, Tarnaka, Secunderabad – 500017, Telangana, India based on input data submitted by the Institute analysed by the team to the best of their abilities.

The details have been consolidated and thoroughly studied as per the various guidelines for Green Buildings available in National and International Standards; the report has been generated based on comparative analysis of the existing facilities and the prerequisites formulated by various standards. The inputs derived are a result of the inspection and research. These will further enhance and develop a Healthy and Sustainable Institution.

These can be implemented phase wise or as a whole depending on the decision taken by the internal team. The warranty or undertaking, expressed or implied is made and no responsibility is accepted by Audit Team in this report or for any direct or consequential loss arising from any use of the information, statements or forecasts in the report.

The audit is a thorough study based on the inspection and investigation of data collected over a period of time and should not be used for any legal action. This is the property of Greenvio Solutions and should not be copied or regenerated in any form.

The Report is prepared by the Team of Greenvio Solutions under their brand and department – Sustainable Academe as Consultancy firm with the Project Head - Ar. Nahida Shaikh who is as an Accredited and Certified Green Building Professional-Architect. Green Building consultancy is her forte and she is one of the most sought after names when it comes to providing excellent quality services within the stipulated time frame.

The Study is conducted in capacity of Accredited & Certified Green Building Professional with extensive experience.

## Greenvio Solutions

*Developing Healthy and Sustainable Environments*

We are an Environmental and Architectural Design Consultancy firm

*Sustainable Academe* is our department for conducting Audits

Palghar District, Maharashtra- 401208

[sustainableacademe@gmail.com](mailto:sustainableacademe@gmail.com)

## Acknowledgement

The Audit Assessment Team extends its appreciation to **The Exhibition Society's Sarojini Naidu Vanita Pharmacy Maha Vidyalaya, Telangana** for assigning this important work of Environment Audit. We appreciate the cooperation extended to our team during the entire process.

Our special thanks are extended are due to everyone from the Management.

Our heartfelt thanks are extended to the Chairpersons of the entire process for valuable inputs - **Dr. N. Srinivas**, (Professor & Director) and **Dr. T. Saritha Jyostna**, (Principal).

We are also thankful to Institute's Task force who have played a major role in data collection.

- ➔ Faculty members – **Dr. Vivek Sagar** (*Special mention for the excellent coordination*), **Mrs. RVS Latha Sree, Mrs. R. Prashanthi, Mrs. V. Uma and Mrs. G.T. Jyothsna**
- ➔ Non-teaching staff members – **Mr. P. Sridhar**
- ➔ Admin staff members – **Mrs. S. Navaneetha, Mrs. B. Vanaja, Mrs. S. Neeraja and Mrs. M. Kameswari**

We highly appreciate the assistance of the **entire Teaching, Non-teaching, and Admin staff** for their support while collecting the data.

### Sustainable Academe

Brand of Greenvio Solutions, Palghar District, Maharashtra- 401208



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# 1. Introduction

## 1.1 About the Institute

*Sarojini Naidu Vanita Pharmacy Maha Vidyalaya, sponsored by The Exhibition Society and established as a Women's College. It offers the following courses:*

- ⇒ *B.Pharmacy*
- ⇒ *Pharm D*
- ⇒ *M.Pharmacy (Pharmaceutics)*
- ⇒ *M.Pharmacy (Pharm.Analysis)*
- ⇒ *M.Pharmacy (Pharm.Quality Assurance)*
- ⇒ *M.Pharmacy(Pharmacology)*
- ⇒ *M.Pharmacy(Regulatory Affairs)*
- ⇒ *Pharm D (Post Baccalaureate)*

*The end objective of the endeavor is to provide the best of facilities meeting international standards within the norms of the Government and University recommended fees. structure, to students from moderate backgrounds, to which it is a dream come true.*

*The Institute's students have bagged university ranks at both undergraduate and postgraduate level. The merit percentage has been always 95 plus.*

*Moreover, the first and second Ranks at PGECET-2013 were from the college.*

## 1.2 Statements of the Institute

### 1.2.1 Vision

The Institute proposes "To be an institution of Excellence for Pharmaceutical Education, a leading knowledge and networking platform for young women aspirants to make a change as accountable healthcare professionals – pharmacists and pharmaceutical scientists – engaged in health promotion, disease prevention; assessment, monitoring, initiation and modification of medication usage to assure safe and effective drug therapy regimens."

### 1.2.2 Mission

The Institute adheres and focuses towards - Formidable role for women in pharmaceutical industry, by preparing them for competitive positions at all levels through research-oriented education, extensive training, skill development, talent management, community reach and develop core values of excellence, Innovation, team work, trust and accountability.

- M1: To have qualified students with profound knowledge in various fields of Pharmaceutical sciences to meet the requirements of the Pharmaceutical Industry, Community and Hospital Pharmacy.
- M2: To provide quality pharmaceutical care to the society in a judicious, coordinated and dynamic way and develop ethical and moral attitude to meet the real-world requirements of society.
- M3: Acquire professional skills in making the products and providing services in health care system.

### 1.2.3 Aim

The College has formulated the following aim to achieve its mission:

- To provide outstanding pharmaceutical education and create a prominent knowledge and networking platform for aspiring young women in the field.
- To empower them to become responsible healthcare professionals, specifically pharmacists and pharmaceutical scientists, who play a pivotal role in health promotion, disease prevention, and ensuring the safe and effective use of medications.

### 1.2.4 Objective

It is the objective of the College is

- to empower women to play a significant and competitive role in the pharmaceutical industry and achieve the same through research-focused education, comprehensive training, skill enhancement, talent nurturing, community engagement, and the cultivation of core values such as excellence, innovation, teamwork, trust, and accountability.
- to prepare women to excel at all levels within the pharmaceutical field.

### 1.2.5 Motto

The College channelizes its efforts towards the motto of "We excel."

## 1.3 Assessment of the Institute

### 1.3.1 Affiliations

The technical course provided by the College is affiliated to **a collegiate public state university located in Hyderabad, Telangana, India**. Mir Osman Ali Khan, the 7<sup>th</sup> Nizam of Hyderabad, issued a firman calling for its creation on 29 August 1917.

### 1.3.2 Certification

The College has received the following Certifications

- **AISHE** – The All India Survey of Higher Education code is C-25626.
- **ISO** – The 9001:2015 Quality Management System has been achieved

### 1.3.3 Approvals

The technical courses provided by the College have taken required approvals as follows:

- Approved by **All India Council for Technical Education (AICTE), New Delhi**.
- Approved by **Pharmacy council of India (PCI), New Delhi**.

### 1.3.4 Accreditation

**The Four Year B. Pharm degree program** is accredited by National Board of Accreditation (NBA), Govt. of India.

## 1.4 Facilities of the Institute

*The campus has state of the art infrastructure to supports its endeavours:*

### **INFRASTRUCTURE**

- *13 well-ventilated and spacious classrooms with LCD projector & screen and computer& 5 tutorial rooms with computers and LCD projectors*
- *21 modern modular laboratories with attached preparation rooms having concealed piping for gas, water and drain lines. Convenient faculty rooms are provided.*
- *State-of-the-art equipment is available for preparing simple dosage forms to advanced novel drug delivery systems using rotary tablet machine, coating pan, triple roller mill, colloid mill, Tray dryer, homogenizers & Ultrasonicator.*
- *High-precision analytical instruments are available for analyzing various dugs & their dosage forms using ATR FTIR, HPLC,UV-Visible spectrophotometer, electrophoresis, pH meters among others*
- *Convenient faculty rooms are provided*
- *Computer Laboratory equipped with high end computers and printers for computer practical sessions and preparation for seminars, conferences and presentations. It also has Language Laboratory tool to train students in English language skills. The lab has 80 systems, with the following configurations:*
  - *20 HP Desktops DX 2480 Intel core 2Duo 2.53 Ghz Processor*
  - *20 Dell-Vostro 3800 I3 Processor/4GB/500/DVD/Wi-Fi*
  - *20 Dell Vostro 3800 I5 Processor/4GB/500/DVD/W-iFi*
  - *20 I5 Processor/8 GB RAM/1 TB HDD/256 GB SSD*

## **ANIMAL HOUSE**

- *In compliance with CPCSEA norms, we have established state-of-art animal house facility, in which every student will get hands-on training on animal handling, drug administration and blood withdrawal techniques.*
- *Every M.Pharm dissertation work will be supported with in vivo studies which will enable the research work to be published in peer reviewed journals*

## **VIRTUAL PHARMACY**

- *Virtual Pharmacy was inaugurated by Sri Navin Mittal, IAS, Commissioner of Technical Education, Govt. of Telangana and Prof. C. K. Kokate, former Vice Chancellor K.L.E. Deemed University, former Vice Chancellor Kakatiya University, and former President, Pharmacy Council of India, on 12th July, 2021.*
- *The Virtual Pharmacy facility is first of its kind in the Country as it familiarizes the students with all the logistics of drug store management.*
- *Virtual pharmacy provides real-time order verification, patient counselling in various therapeutic segments and check the drug – drug interactions of the prescriptions*
- *Students learn to perform the role of Pharmacist, vital sign measurements, monitoring and auditing of drug store activities*
- *Virtual pharmacy provides a unique opportunity to know therapeutic segment-wise brand names of drug products and their manufacturers apart from understanding the inventory management principles.*

**LIBRARY**

- *A well-stacked library on the top floor with ample ventilation convenient for effective study/ reading.*
- *It is well spread out over a plinth area of 150 sq. mt.*
- *Houses a reading room, reference section,*
- *Has 1203 titles, 12732 volumes, 24 national and 16 international journals.*
- *The digital library gives student access to E-journals*
- *Internet facility for staff and students.*
- *Can seat 75 students at a time.*

**OTHER FEATURES**

- *An air-conditioned auditorium with a 250 seating capacity and a seminar hall that accommodates a hundred.*
- *Computer Laboratory.*
- *Wi-Fi connectivity*
- *A Board Room.*
- *Girls Common Room*
- *2 lifts and 3 wide stairways*
- *An elegant hallway and a spacious room for Principal and Chairman-cum-Secretary.*
- *Efficiently planned Office and Administrative wing*
- *Attractive facade with glass panelling*
- *30,000 sq. ft. cellar parking*

## 2. Overview

### 2.1 Summarised Populace analysis for 2022-2023

#### 2.1.1 Students data

The data shared by Institute shows there were **589 female students**.

#### 2.1.2 Staff data

S. No.	Type	Male	Female	Total
1	Admin staff	01	08	09
2	Teaching staff	07	50	57
3	Non-Teaching staff	08	24	32
<b>Total Staff Members</b>		<b>16</b>	<b>82</b>	<b>98</b>

*Table 1: Staff data of the Institution for 2022-2023*

The staff data shows the Institute premises had a total of **98 Staff Members**.

### 2.2 Summarised Populace analysis for 2021-2022

#### 2.2.1 Students data

The data shared by Institute shows there were **524 female students**.

#### 2.2.2 Staff data

S. No.	Type	Male	Female	Total
1	Admin staff	01	05	06
2	Teaching staff	03	40	43
3	Non-Teaching staff	07	15	22
<b>Total Staff Members</b>		<b>11</b>	<b>60</b>	<b>71</b>

*Table 2: Staff data of the Institution for 2021-2022*

The staff data shows the Institute premises had a total of **71 Staff Members**.



## 2.3 Site & Institute Building Spread Area

The Institute is spread over **1 acre** with a built-up area comprising of **1,00,000+ sq. ft.** designed into multiple blocks for educational and residential purposes for a populace of 687 stakeholders (Students and staff members).

## 2.4 Institute Infrastructure

### 2.4.1 Establishment

The Institute was established in **1997**.

### 2.4.2 Spatial Organisation

The Institute is located in a pollution free and healthy environment. The Building is a Reinforced Cement Concrete (RCC) framework building. There are provisions for staircase for accessibility on the premises, whereas there are amenities such as CCTV, a first aid room, etc.

## 2.5 Operation and Maintenance of the premises

The interview session was held with the staff regarding the operation and working hours. The Institution is open from Monday to Saturday with the timings being 10:00 to 17:00 hours.

## 3. Research

### 3.1 About the Green Building Study Audit

It is a systematic study of the aspects which make the Institution sustainable and healthy premises for its inhabitants.

### 3.2 Analysis of the Green Building Study Audit

The procedure included detailed verification as follows:

- Investigation
- Technical discussion with team
- Observations
- Inferences

### 3.3 Strategy adopted for Green Building Study Audit

The strategies included data collection from the admin department, actual inventory, investigation to check the operation and maintenance, analysis of the data collection, and preparation of the Report.

### 3.4 Activities undertaken for the Green Building Study Audit

- Discussion with the Institute
- Allotment and Initiation by the Institute
- Data collection
- Submission of the files

**Evidence documents for Site visit of external audit team**

Audit team headed by external expert - Ar. Nahida Abdulla  
 Accredited & Certified Green Building Professional, ISO IA (IMS)  
 Audit objective: Green Building up gradation of the premises

Audits covered:  Green audit  Energy audit  Environment audit

Institute: SAROJINI NAIDU VANITA PHARMACY MAHAVIDYALAYA Date: 7 Nov 2023

**Document objective: Induction Meeting attendance sheet**

S. No.	Name	Committee	Designation	Signature
1.	Mrs. F. A. Shaikh	External	Project Coordinator	
2.	Ar. Nahida Abdulla	External	Project Head	
3.	Dr. N. Srinivas	INTERNAL	Professor & Director	
4.	Dr. T. Saritha Jyostna	INTERNAL	Professor & Principal	
5.	Dr. T. Mamatha	INTERNAL	Professor & Vice Principal	
6.	Dr. Vivek Sagar	INTERNAL	Professor & HOD	
7.	Mrs. RVS Latha Devi	INTERNAL	Associate Professor	
8.	Mrs. P. Uma	INTERNAL	Assistant Professor	
9.	Mrs. G.T. Jyostna	INTERNAL	Assistant Professor	

Signature & round seal

Name: Dr. T. Saritha Jyostna

Designation: PRINCIPAL

For the said Institute

Sarojini Naidu Vanita Pharmacy Maha Vidyalaya  
 Vijayapuri Colony, S. Lakuguda, Tamil Nadu  
 SECUNDERABAD-506 017



Signature & round seal

Name: Mrs. F. A. Shaikh

Designation: Project Coordinator

For The Greenvio Solutions



**Evidence documents for Site visit of external audit team**

Audit team headed by external expert - Ar. Nahida Abdulla  
 Accredited & Certified Green Building Professional, ISO IA (IMS)  
 Audit objective: Green Building up gradation of the premises

Audits covered:  Green audit  Energy audit  Environment audit

**Institute:** SAROJINI NAIDU VANITA PHARMACY MAHA VIDYALAYA **Date:** 7 NOV 2023

**Document objective: Exit Meeting attendance sheet**

S. No.	Name	Committee	Designation	Signature
1.	Mrs. F. A. Shaikh	External	Project Coordinator	
2.	Ar. Nahida Abdulla	External	Project Head	
3.	Dr. N. SRINIVAS		Professor & Director	
4.	Dr. T. Saritha Tyostna		Professor & Principal	
5.	Dr. T. Mamatha		Professor & Vice-Principal	
6.	Dr. Vivek Sagar		Professor & HOD	
7.	Mrs. RVS Latha Sree		Associate Professor	
8.	Mrs. P. Uma		Assitant Professor	
9.	Mrs. G.T. Tyostna		Assistant Professor	

Signature & round seal  
 Name: Dr. T. Saritha Tyostna  
 Designation: PRINCIPAL

**For the said Institute**  
 Sarojini Naidu Vanita Pharmacy Maha Vidyalaya  
 Vijayapuri Colony, S. Lalaguda, Tarnaka,  
 SECUNDERABAD-500 017.



Signature & round seal  
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## 4. Observation

A site visit was conducted at the site on **07 November 2023** and the following observations were noted as part of the physical investigation.

The following points were observed during the investigation and are documented for being '**POSITIVE ASPECTS**' that are beneficial to the stakeholder and the campus.

### 4.1 Actual positive points based on the site visit

The following points are based on the site visit observations:

- ➔ Less noise pollution and silent as compared with the outside areas and helps to concentrate on studies highlighting the calm atmosphere.
- ➔ Architectural landscape and streetscape features such as:
  - Dedicated paved setback areas with light colored flooring pattern used.
  - Suggestion box
  - First aid box



*Plate 1: on-site discussion with the stakeholders*

## 4.2 General positive points w.r.t sections

The following points are based on the general observations of the visit and the detailed discussions undertaken.

### 4.1 Site beautification

This section studies aspects that add to the beauty of the existing contextual parameters.



Plate 2: Green cover of the site

### 4.2 Heat island reduction

This section studies aspects that help to keep the micro temperature of the site under control for comfort levels of the stakeholders.



Plate 3: Heat island measures on site

### 4.3 Life safety

This section studies aspects related to fire and life safety provisions available in the premises.



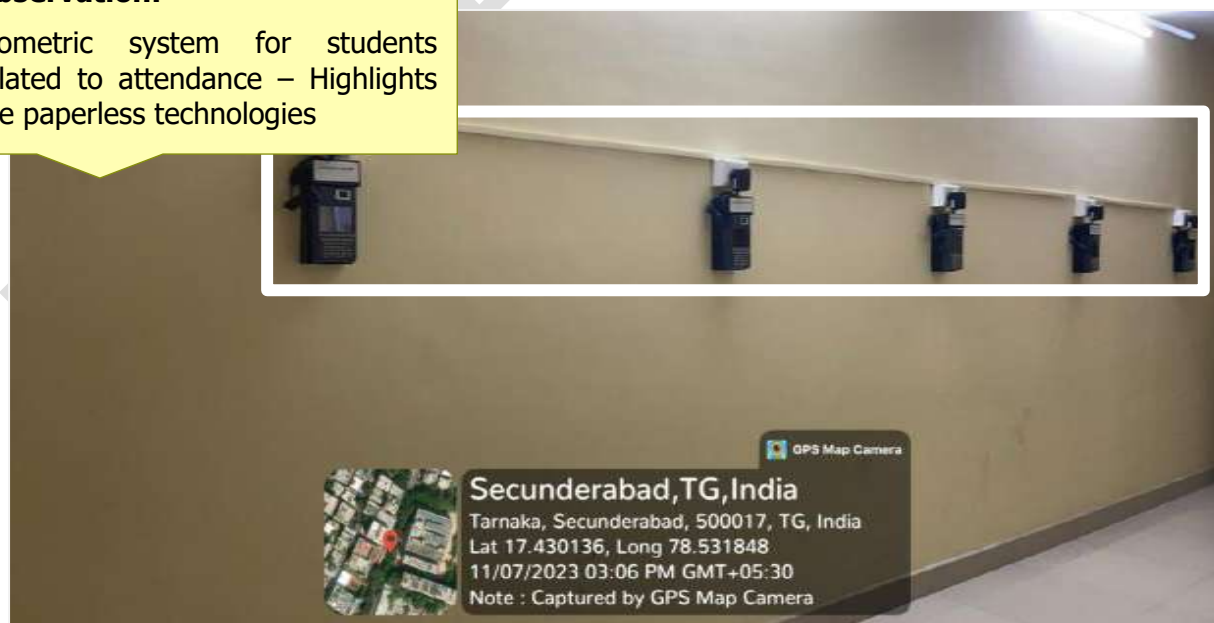
*Plate 4: Fire and Life safety practices in the premises*

### 4.4 Pollution Control

This section studies aspects that help to keep the pollution levels under control for a healthy and safe environment.

**Observation:**

Biometric system for students related to attendance – Highlights the paperless technologies



*Plate 5: Digital Campus facilities – Biometric system*

## 5. Documentation

### 5.1 Site beautification

#### 5.1 Open Spaces

There is scope to improve the ecological cover and introduce organic farming, vertical gardening etc. in the premises.

#### 5.2 Flora audit

A survey was carried out to identify ecological footprint of site as documented below:

S. No.	Plant name	Type	Nos.
1	<i>Dwarf Umbrella</i>	Herb	3
2	<i>Ti (Cordyline Fruticosa)</i>	Herb	3
3	<i>Screw Pine</i>	Herb	4
4	<i>Seebum</i>	Herb	2
5	<i>Areca Palm</i>	Shrub	7
6	<i>Aparanjitha</i>	Herb	1
7	<i>Oleander</i>	Tree	1
8	<i>Delonix Regia Gulmohar</i>	Tree	3
9	<i>Tulasi</i>	Herb	2
10	<i>Glossy Privet</i>	Tree	5
11	<i>Muringa Tree(Drum Stick)</i>	Tree	1
12	<i>Tylophora</i>	Creepers	4
13	<i>Paeoniamascula</i>	Herb	1
14	<i>Schefflera Actionophylla</i>	Tree	7
15	<i>Khaya Senagalensis</i>	Tree	3
16	<i>Crosso Stephium</i>	Herb	1
17	<i>Hydrocotyle Vulgaris</i>	Herb	1
18	<i>Ficus Squamosa</i>	Plant	1
19	<i>Chamaeceostus Cuspibatus</i>	Herb	1
20	<i>Artemesia Vulgaris</i>	Herb	1
21	<i>Siboulet</i>	Herb	1



22	<i>Murraya Koenigii</i>	Plant	1
23	<i>Stereo Spermum</i>	Plant	1
24	<i>Mango</i>	Plant	4
25	<i>Mango</i>	Tree	1
26	<i>Boue</i>	Tree	1
27	<i>Hibiscus</i>	Tree	4
28	<i>Lemon</i>	Plant	1
29	<i>Tamaarind</i>	Plant	1
30	<i>Curcuma</i>	Tree	3
31	<i>Henna</i>	Plant	1
32	<i>Almond</i>	Tree	2
33	<i>Guava</i>	Tree	1
34	<i>Jacropa Curcus</i>	Tree	1
35	<i>Deloria Belpatra</i>	Plant	1
36	<i>Cynomepras</i>	Herb	1
37	<i>Kapebonavista</i>	Herb	4
38	<i>Tamarind</i>	Tree	1

**Table 3: Details of the Flora in the premises**

**At present there are 82 nos. of plantations in the premises.** All of these are planted by the on various occasions and some have grown naturally. Timely maintenance with sufficient care has resulted in positive benefits for the surroundings.

Being a pharmacy Institute as per the syllabus requirement there is availability of pharmacognosy garden as well in the premises.

## 5.2 Heat island reduction

The external temperature is well under control due to:

- Light colored facades
- Light colored paving blocks in outdoor areas
- Buildings on all four sides provide shade to the campus

## 5.3 Life safety

Fire and life safety are an important consideration of the National Building Code 2016.

This aspect is touched upon as part of this study in the capacity of an Architect registered with the Council of Architecture. As part of the research, fire safety audit was considered from the 'Building systems' perspective. All provisions are documented below:

- **Fire hose reel** – Near the appropriate duct areas
- **Fire extinguisher** – In spaces that have air conditioners
- **Sand buckets** - Near the life and general areas with large footfalls
- **Fire sprinkler and alarm system** – This is available in the cellar areas as there is underground parking provision provided.
- **Fire resistant door** – These are available in the fire exit point on all floors
- **Fire hydrant cabinet** – This is available on every floor and Staircase mid-landing.

## 5.4 Pollution Control

### 5.4.1 Noise Audit

On a macro level the Institute is surrounded by educational and residential blocks **thus there is a peaceful and noise free arena observed within the premises.**

### 5.4.2 Eco-friendly Commuting Practices

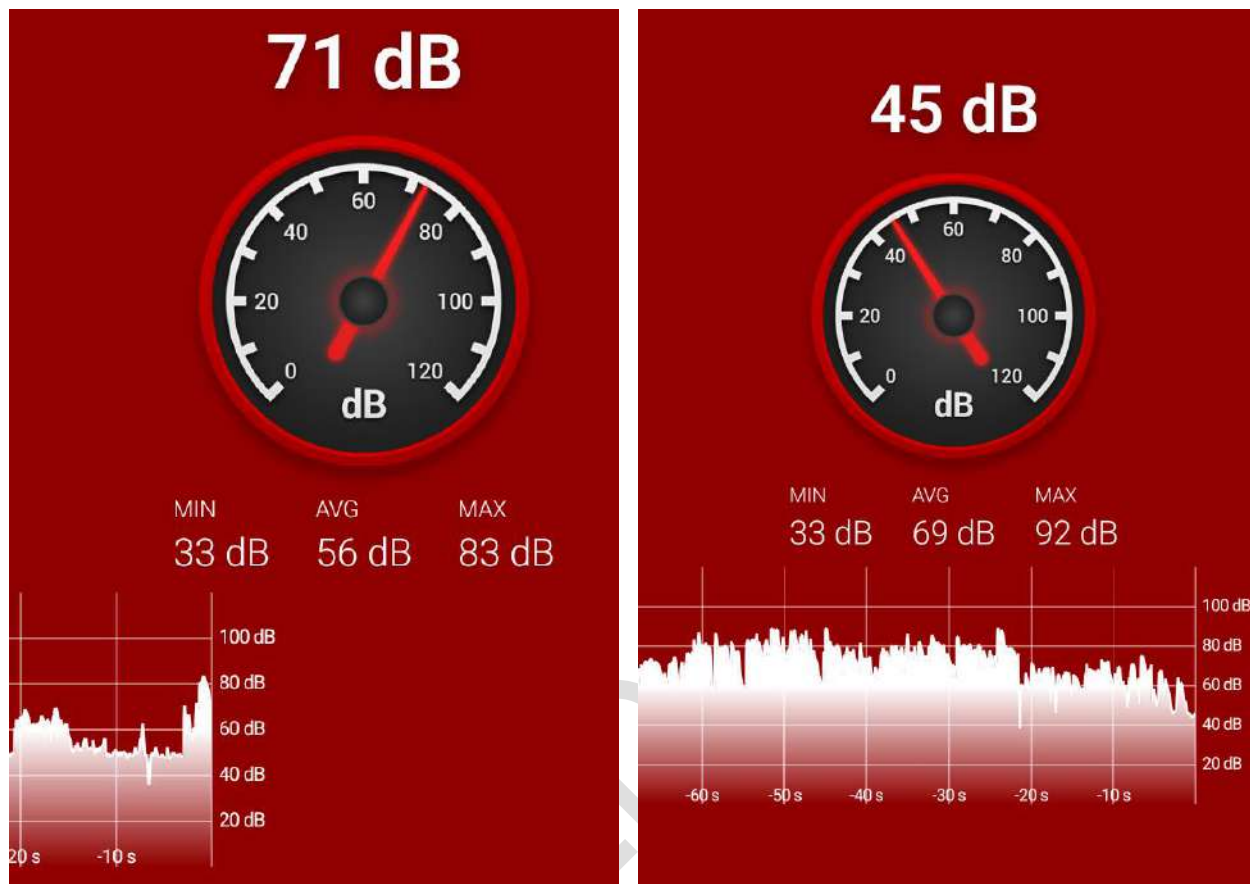
- The site is located in an urban locality.
- Overall, the carbon footprint is well under control.
- Students and staff members commute using public transport.
- There are no major fossil fuels used inside the premises.

### 5.4.3 Outdoor Light Pollution Study

The Institute compound lights are not upward looking thus, these do not cause light pollution. However, there is certain landscape lights designed for upward facing upwards but the extent is under control thereby not leading to any environmental degradation.

## 6. Investigation

The following results are based on the investigation carried out during the site visit.



*Figure 1: Sound level study in outdoor and indoor areas*

## 7. Exhortation

### 7.1 Site suggestions

The following suggestions are to be considered as a ***first priority*** and should be **executed within the next 1.5 to 2.5 years from the date of the Report submission**. The Institute can execute a plan after discussion with Project Head.

S. No.	Space	Comment	Action to be taken
1.	Entire campus Electrical aspects	Documentation	Name the switch boards as SB or MB (Main board) with numbering Conceal the wirings wherever available
2.	Fire & Life safety General aspects	Documentation	<ul style="list-style-type: none"> <li>➤ Include a bigger display about floor</li> <li>➤ Mark the Fire Resistant Door</li> <li>➤ Include fire safety signages</li> <li>➤ Include PASS and RACE boards</li> <li>➤ Every Fire Hydrant Cabinet should have a display board on how to use it?</li> </ul>
3.	Fire & Life safety Chemical Lab aspects	Documentation and safety measures	<ul style="list-style-type: none"> <li>➤ Introduce rubber flooring</li> <li>➤ Introduce MSDS for toxic chemicals as display board, book for less toxic chemicals</li> <li>➤ Lab safety chart should be displayed in every lab</li> </ul>
4.	Fire & Life safety Electrical Lab aspects	Documentation	The server room should have any one of the following to balance the cooling loads <ul style="list-style-type: none"> <li>➤ 3 table fans</li> <li>➤ One 0.75ton air conditioner</li> <li>➤ One air cooler</li> </ul>
5.	Fire & Life safety Increase provision	Spaces – safety	Increase fire extinguisher/ sand buckets in: <ul style="list-style-type: none"> <li>➤ Seminar hall</li> <li>➤ Auditorium</li> <li>➤ Laboratories</li> </ul>
6.	Lift	Documentation	Include the following signages/ display <ul style="list-style-type: none"> <li>➤ Do not use life in case of fire</li> <li>➤ Fire escape route</li> </ul>

Table 4: Site suggestions

## 7.2 Section-wise suggestions

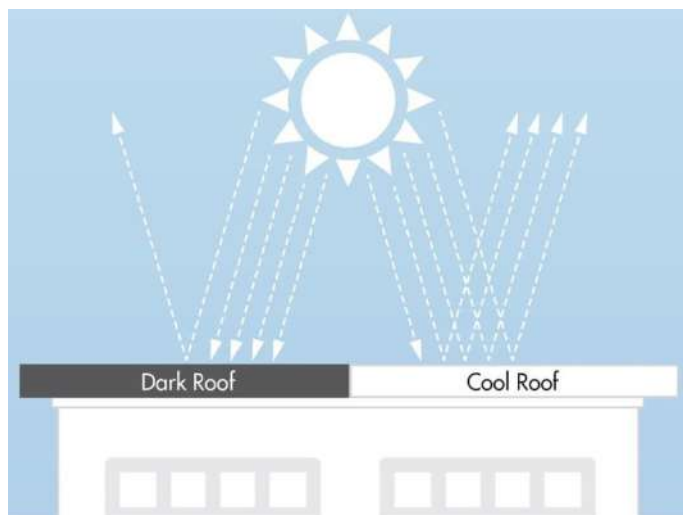
The following suggestions are ***not an urgent priority*** and **can be executed in 5 years from the date of the Report submission.**

### 7.2.1 Site beautification

- **Bird house/ Feeders** - At appropriate locations there can be provisions for drinking water and some grains for birds as they visit the site much frequently.
- **Garden development** - The existing open space should be designed as an Architectural landscape.
  - *Nursery documentation, expansion and beautification* – The premises should have a nursery, details can be decided as per the landscape beautification.
  - *Scientific name plates and QR codes* – The team should undertake a project to have name plates with QR codes on every plant of the premises.
  - *The landscape redesign and ecological redesign* – This should be done to increase the shade cover in the entire premises.
- **Architectural landscape and streetscape features such as:**
  - *Parking mirror*
  - *Bollards with lighting for safety and landscape*
  - *No parking signboards at dedicated locations*
  - *Direction sign board*
  - *Post box*
  - *Suggestion box*
  - *First aid box*
  - *Seating area as breakout zones*
  - *Vertical plantations (potted) to beautify blank spaces*
  - *Signboard about specific space*
  - *Signboard about the various blocks*

## 7.2.2 Heat island reduction

**Cool rooftops** - The Terrace rooftops should be painted with Cooltop – reflective materials to reflect the harsh sun rays and reduce the heat absorption in the top most floor and surrounding areas of the building.



*Plate 6: Cool roof comparative analysis (For reference purpose only)*

Source: Image by <https://www.gaf.com/en-us/blog/six-truths-about-cool-roofs-281474980105387>

## 7.2.3 Life safety

- ➔ **Mandate fire extinguisher in spaces** - One fire extinguisher should mandatorily be there in every space which has an air conditioner/ gas cylinder.
- ➔ **Combustible equipment** - Every space which has a gas cylinder or combustible equipment should have a provision for the barricade around the gas cylinders, appropriate safety board's mentioning 'danger sign' and 'Do not touch' with an additional small fire extinguisher close by.
- ➔ **Awareness** - Fire layouts in immediate spaces outside the lift, on the staircase landing, signages mentioning 'Do not use lift in case of fire' additionally fire exit signages, boards should be put up at all possible locations.

## 7.2.4 Pollution Control

- ➔ **Specific area designated for E-vehicles** – There should be designated area dedicated to E-vehicles parking and charging and this zone should be demarcated as 'Eco-Zone'
- ➔ **Promote the use of Eco-friendly vehicles** - There can be student and staff sensitization program on eco-friendly and battery-operated vehicles/ low emission vehicles for daily use.
- ➔ **Bicycles as a gift** - As an appreciation gesture maybe the student's toppers/ staff best performers can be awarded a bicycle occasionally.
- ➔ **Paperless technologies for offices** - The Institute can go technology-friendly and go paperless in the functioning of premises to a certain extent maybe not fully.
- ➔ **Plant more radiation absorbing plants** - The following flora helps in reducing the harmful effects to a certain extent, the Institute can develop a radiation free zone and take to planting these through potted plants or permanent planting:
  - a. Spider plant
  - b. Rubber plant
  - c. Asparagus fern
  - d. Snake plant
  - e. Nelumbo nucifera (Includes colourful flowers)
  - f. Cactus
  - g. Areca palm
  - h. Mustard green
  - i. Betel
  - j. Aloe vera
  - k. Sprengers asparagus
  - l. Fiddle fig

**On-site investigation and physical verification**  
**Audit Team during the visit and other photos collected during data documentation**



Meeting and group photo with the team



On-site investigation parameters – Cellar, Office, Laboratories and Library areas



Seminar on 'Trash to treasure' to the stakeholders



## 8. Compilation

The study is based on the data collected, analyzed, rechecked, and confirmed through multiple modes. For the quality study, some standards/ notes have been referred to. These are listed and noted below. However, no direct references have been used anywhere. These are used as a base to analyze and study the data collected.

### National references

- ➔ Uniform Plumbing Code – India, 2008
- ➔ IGBC Green Existing Buildings – Operation & Maintenance (O&M) Rating system, Pilot version, Abridged Reference Guide, April 2013
- ➔ IGBC Green Landscape Rating system, March 2013

### International references

- ➔ BOMA Canada Waste Auditing Guide, Best Environmental Standards, BOMA BEST – Canada
- ➔ Used only for understanding Universal design - Universal Accessibility Guidelines for Pedestrian, Non-motorized vehicle and Public Transport Infrastructure – Report guidelines by Samarthyam (National center for Accessible Environments) – an initiative supported by Shakti Sustainable Energy Foundation and [www.umassd.edu](http://www.umassd.edu)
- ➔ The city of Cheyenne, Streetscape/ Urban Design elements - Wyoming Planning Association, Gillette, Wyoming, United States
- ➔ Streetscape elements – Chapter 6 on San Francisco
- ➔ American lung association <https://www.lung.org/>
- ➔ Study related to air pollution <https://www.airgle.com/>
- ➔ Exploring the light pollution <https://education.nationalgeographic.org/>
- ➔ Accessibility study <https://www.washington.edu/>
- ➔ Urban heat island effect <https://www.epa.gov/heatislands/what-you-can-do-reduce-heat-islands>

