DRM OFFICE- GUNTAKAL
AN IGBC PLATINUM RATED BUILDING

Mr. Alok Tiwary, IRSE, DRM- Guntakal

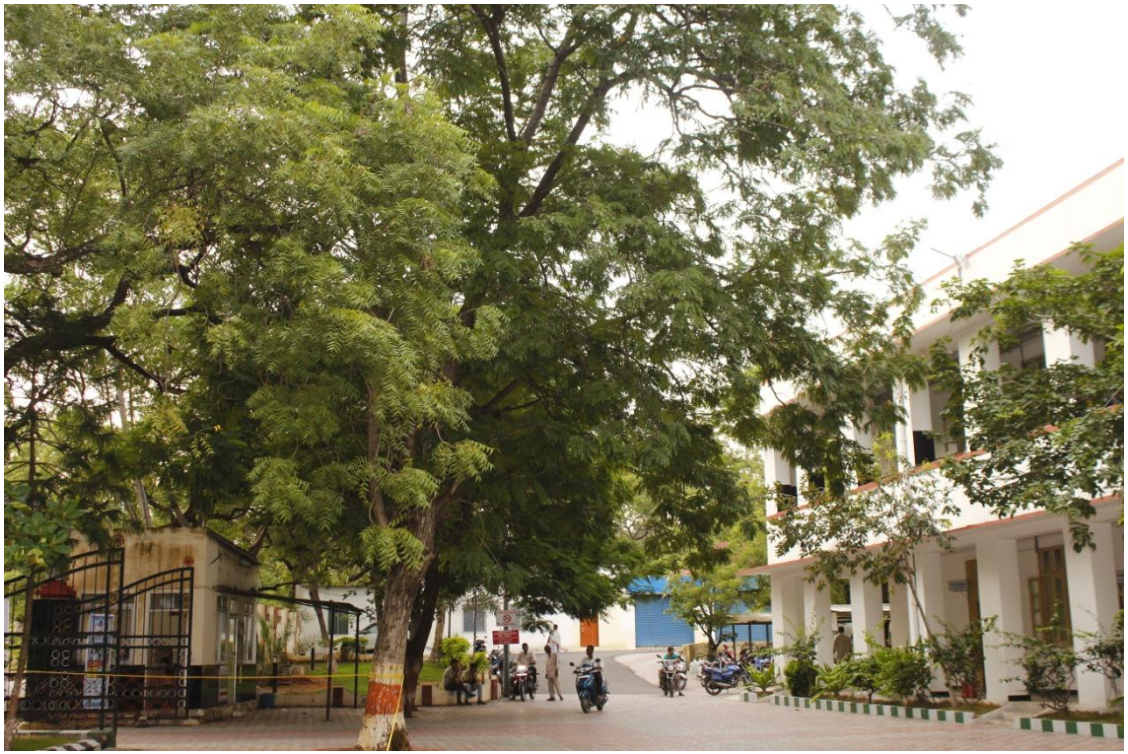
South Central Railway

Service with commitment Progress with Pride

DRM OFFICE- GUNTAKAL

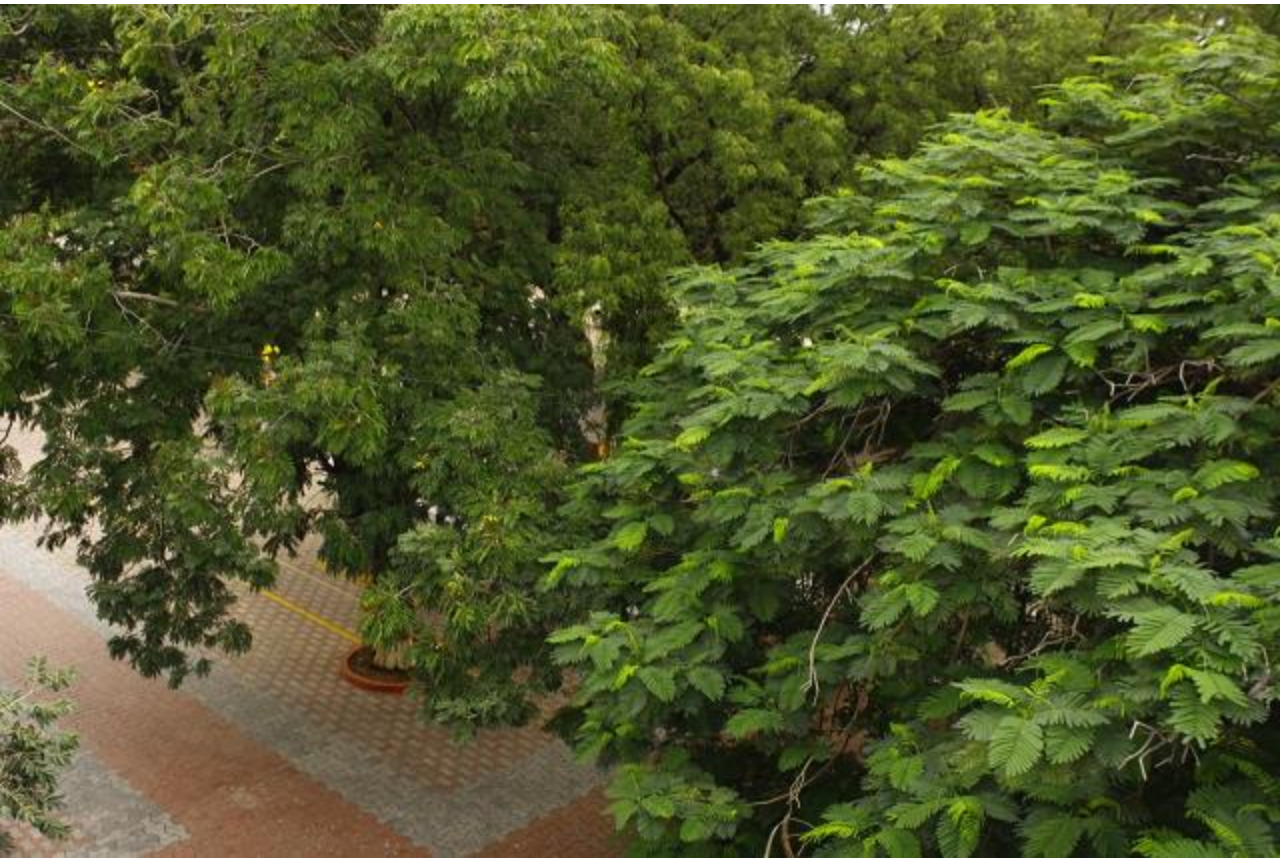
ONE OF THE FIRST FEW EXISTING BUILDINGS IN SOUTH CENTRAL RAILWAY TO ACHIEVE IGBC PLATINUM RATING

Key Green Aspects



As per ridership survey analysis, 62% of the employees uses shared auto or prefer walking.

Key Green Aspects



42 % of the total site is landscaped

Adopted eco-friendly landscape practices

100 % of plantations are native and adaptive and we use vermi-compost for all plantations

Key Green Aspects

100% of the roof areas including parking are covered with high SRI Paint

Key Green Aspects

57 % reduction in potable water consumption from baseline

by installing sensor based urinals, low flow taps, and efficient flush

Key Green Aspects

Rain water harvesting system to capture one day peak rainfall.

It caters to 142% of the peak one-day rainfall

Key Green Aspects

- A Sewage treatment plant (STP) of ~5 KLD is installed and the treated water is being reused for landscape irrigation.
- Water meter are provided separately for Gardening, Drinking & Flushing to analyze more water consumption areas.

Key Green Aspects

- **Most of the office is well lit and well ventilated**

Key Green Aspects

- **The Office uses 5 star inverter split ACs with R410A refrigerant, which is CFC free**
- **The project has achieved an EPI of 14.85**

Key Green Aspects

- **120 kW of Roof Top Solar Photovoltaic system is generating 25.21% of the annual energy consumption.**

DRM OFFICE- GUNTAKAL
ENHANCING THE ENERGY PERFORMANCE

Mr. Gunjan, Principal

Green Inertia
Delivering Sustainable Design

EPI OF 14.85

Key Energy Efficiency- Measures

- 100 % of Space equipped with Natural Ventilation
- More than 75 % of area with Natural lighting
- 100 % LED lighting fixtures
- Occupancy sensors in all common areas
- 75 % BLDC fans in complete building
- 5 star rated AC units.

Key Energy Efficiency- Measures

- 50 % of Total Demand Being Met by Roof top Solar PV
- Achieved an EPI of 15 as against 35
- Energy Metering for Acs, PVs, DGs
- Natural Ventilation in all space reducing dependency on Acs
- Traditional Courtyard Planning with high corridors allowing daylight but not direct solar radiation

Key Energy Efficiency- Measures

- 100 % of Roof Area with High SRI Paint reducing solar heat gain from the roof
- External light power density reduction by 70 %
- Most of the Hardscape areas are covered with fully grown trees reducing ambient temperature
- Investment in off site Solar PV

Natural Lighting and Ventilation- Reducing dependency on artificial ventilation and lighting-helping in overall energy consumption reduction and adding to better occupant health

100 % LED Lights

75 % BLDC Fans



Most of common areas and toilets are with occupancy sensors

Most of Officers Chambers are with occupancy sensors

120 kW of Roof top Solar PV
meeting more than 50% of Building Annual Energy Consumption

Traditional courtyard planning with fully grown large trees creating microclimate around the building thus reducing dependency on ACs

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Use of High SRI Paint to reduce roof heat gain

Sun pipes in office space to enhance natural light


IGBC® GREEN EXISTING BUILDING
INDIAN GREEN BUILDING COUNCIL
Divisional Railway Manager Office Building
Guntakal, Andhra Pradesh
PLATINUM
2019

Thank you