EXECUTIVE ENGINEER (Electrical) & DEPUTY ENGINEER (Electrical), Amravati Amravati division

GRIHA EB

★★★☆☆

3 STAR

Location	: Amravati district, Maharashtra
Site Area	: 1,198 sq.m.
Built up Area	: 220 sq.m.
Typology	: Commercial
Rating Category	: GRIHA for Existing Buildings (EB)
Version	: 1
Date of Award	: 3 June 2019
Client	: Government of Maharashtra
Integrated Design Team	: Public Works Department (PWD) Maharashtra
Green Building Consultant	: Shashwat Green Building Consultancy

The following strategies were adopted by the project teams to reduce the impact of the existing building on the environment:

Site Parameters:

- Availability of amenities such as bus stop, bank, pharmacy, restaurant and grocery store within 500 meters walking distance from the main entrance of the project.
- Strategies implemented over 389.45 sq.m. of site area to reduce the Urban Heat Island Effect.

Energy:

- Replacing the old lighting fixtures with LEDs, installation of efficient fans has reduced the annual energy consumption from 1,1980 kWh/year to 8,527 kWh/year.
- Solar photovoltaic system proposed of 2 kWp to generate 3060 kWh of renewable energy.

Water Efficiency:

- Building water consumption reduced from 170.4 kiloliters/year to 117.6 kiloliters/year
- The total sewage water generated on site is 0.44 kiloliters/day.

Human Health and Comfort:

- Indoor comfort conditions measured in summer months; Dry bulb temperature= 30 - 31°C, Relative humidity= 46% – 49% and Indoor noise levels: 34 - 38 dB were compliant with benchmarks of the Indian Model for Adaptive comfort.

Total energy offset by renewables	Total reduction in building water demand
= 35.9%	**= 31%**

TOTAL CARBON OFFSET BY THE PROJECT:

By planting native saplings & preserving existing trees: 0.28 ton/year

By conservation of conventional energy: 7.09 ton/year