# EXECUTIVE ENGINEER PWD AND R.P.D. SUB DIVISION NO.1,2,3, Amravati Amravati division

GRIHA EB

★★★☆☆

**3 STAR**

| | |
|---|---|
| **Location** | : Amravati district, Maharashtra |
| **Site Area** | : 3,709 sq.m. |
| **Built up Area** | : 693 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 1136.4 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 4,875 kWh/year to 4054 kWh/year.
- Solar photovoltaic system proposed of 1 kWp to generate 1530 kWh of renewable energy.

**Water Efficiency:**

- Building water consumption reduced from 310.3 kiloliters/year to 211.6 kiloliters/year
- The total sewage water generated on site is 0.79 kiloliters/day.

**Human Health and Comfort:**

- Indoor comfort conditions measured in summer months; Dry bulb temperature= 29 - 31°C, Relative humidity= 45% – 48% were compliant with benchmarks of the Indian Model for Adaptive comfort.

| Total energy offset by renewables | Total reduction in building water demand |
|---|---|
| **= 37.7%** | **= 31.8%** |

**TOTAL CARBON OFFSET BY THE PROJECT:**

**By planting native saplings & preserving existing trees: 0.83 ton/year**

**By conservation of conventional energy:2.56 ton/year**