

Why do Malayan homes have a large roof overhang?

Malay homes install a large roof overhang and the West Indians use verandas to reduce solar gains. These design solutions allow windows to remain open for natural ventilation in a building during rainy season. Samoans long ago did not install walls to allow free-flow breezes. Malayan homes' plentiful windows aim to maximize cross-ventilation.

How does transport affect urban heat island (UHI)?

Energy contained in the fuel is transformed into heat, which inevitably increases the magnitude of the urban heat island (UHI) effect. Mitigation measures related to transport are typically applied

Why is Singapore a heat island?

Buildings, with less vegetation to provide shade and cooling, and are built of materials that absorb and store energy from the sun. The urban heat island effect over much of Singapore averages about 4°C, though it can exceed 7°C at certain times of the day. This warming reduces thermal comfort, discourages people from walking or cycling, and in

How to reduce building energy demand for indoor cooling purpose?

Indoor air temperature reduction and building shading by vegetation can lower building energy demand for indoor cooling purpose. Singapore, an urban area located in the tropics, has a regional climate that is close to the level of thermal discomfort due to high air temperatures and

(DOI: 10.1007/S12273-014-0182-7) Solar radiation and insufficient shading on buildings during peak hours might increase outdoor insolation and indoor energy needs for cooling loads. ...

This book provides a review of overhang design methods for optimal thermal and daylighting performance. It starts with a historical overview of methods based on solar positions and shading ...

Passive cooling techniques can reduce the peak cooling load in buildings, thus reducing the size of the air conditioning equipment and the period for which it is generally required. This paper reviews and ...

Discover the ideal overhang for your kitchen island to enhance style and functionality. This article explores the recommended depths--12 inches for standard seating and 15 to 20 inches for ...

An overhang, or some sort of solar control or solar shading, is a crucial element in passive solar design because it blocks the sun's heat energy when it is not desired.

To alleviate it, climatic shelters emerge as an initiative for the research community, which should deepen the integration of technologies that use natural resources for cooling. This work aims ...

When designing your kitchen, one crucial aspect to consider is the overhang of your kitchen island. The kitchen island overhang not only affects aesthetics but also functionality. A well ...

This report is the first publication of the Cooling Singapore team. It presents a comprehensive review of potential measures to tackle the urban heat island effect, focusing especially upon the needs of cities ...

Here, we explain how to incorporate natural cooling ideas at the design stage. Whether you are self building, extending or carrying out major renovation works, it is well worth designing in ...

Coastal hazards such as rising sea levels and severe erosion threaten housing stability on Saibai Island. These hazards impact residents' livelihoods both short and long term.

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In cold climates, proper insulation is essential to maintain energy efficiency, protect structural elements, and ensure comfort in buildings. One often overlooked area that requires careful ...

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