| v3 - LEED 2009

Heat island effect - nonroof

SSc7.1 | Possible 1 point

Glossary

Intent

To reduce heat islands[1] to minimize impacts on microclimates and human and wildlife habitats.

Requirements

Choose 1 of the following options:

Option 1

Use any combination of the following strategies for 50% of the site hardscape (including roads, sidewalks, courtyards and parking lots):

- Provide shade from the existing tree canopy or within 5 years of landscape installation; landscaping (trees) must be in place at the time of certification application.
- Provide shade from structures covered by solar panels that produce energy used to offset some nonrenewable resource use.
- Provide shade from architectural devices or structures that have a solar reflectance index (SRI)[2] of at least 29. Implement a maintenance program that ensures these surfaces are cleaned at least every 2 years to maintain good reflectance.
- Use hardscape materials with an SRI of at least 29 and implement a maintenance program that ensures these surfaces are cleaned at least every 2 years to maintain good reflectance.
- Use an open-grid pavement system (at least 50% pervious).

OR

Option 2

Place a minimum of 50% of parking spaces under cover[3]. Any roof used to shade or cover parking must have an SRI of at least 29, be a vegetated roof or be covered by solar panels that produce energy used to offset some nonrenewable resource use. Implement a maintenance program that ensures all SRI surfaces are cleaned at least every 2 years to maintain good reflectance. The top parking level of a multilevel parking structure is included in the total parking spaces calculation but is not considered a roof and is not required to be an SRI surface.

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[1] Heat islands are defined as thermal gradient differences between developed and underdeveloped areas.
[2] The solar reflectance index (SRI) is a measure of the constructed surface's ability to reflect solar heat, as shown by a small temperature rise. It is defined so that a standardblack surface (reflectance 0.05, emittance 0.90) is 0 and a standard white surface (reflectance 0.80, emittance 0.90) is 100. to calculate the SRI for a given material, obtain the reflectance value and emittance value for the material. SRI is calculated according to ASTM E 1980. Reflectance is measured according to ASTM E 903, ASTM E 1918, or ASTM C 1549. Emittance is measured according to ASTM E408 or ASTM C 1371.
[3] For the purposes of this credit, under cover parking is defined as parking underground, under desk, under roof, or under a building.

Credit substitution available
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