| v3 - LEED 2008

Local heat island effects in mid-rise buildings

MSSc3 | Possible 2 points

Glossary

Intent

Design landscape features and choose roofing materials to reduce local heat island effects.

Requirements

Prerequisites

None.

Credits

3.1 **Reduce site heat island effects for mid-rise** (1 point). Do one of the following:

a. Locate trees or other plantings to provide shading for at least 50% of the site hardscapes (including sidewalks, patios, courtyards, driveways, or parking decks). Shading should be calculated for noon on June 21, when the sun is directly overhead, based on five years' growth.

b. Install light-colored, high-albedo materials or vegetation for at least 50% of the site hardscapes (including sidewalks, patios, courtyards, driveways, or parking decks). Acceptable strategies include the following:

a. White concrete;

b. Open pavers (counting only the vegetation, not the pavers); and

c. Any material with a solar reflectance index (SRI) of at least 29.

3.2 **Reduce roof heat island effects for mid-rise** (1 point). Do one of the following:

a. Use roofing materials with a solar reflectance index (SRI) equal to or greater than the values in the table below for a minimum of 75% of the roof surface.
Roofing materials having a lower SRI value than those listed below may be used if the weighted rooftop SRI average meets the following criteria:
(Area Roof Meeting Minimum SRI ÷ Total Roof Area) * (SRI of Installed Roof ÷ Required SRI) ≥ 75%

Roof type	Slope	SRI
Low-sloped roof	≤2:12	78
Steep-sloped roof	>2.12	29

b. Install a vegetated roof that covers at least 50% of the roof area.

c. Install high-albedo and vegetated roof surfaces that, in combination, meet the following criteria:
(Area Roof Meeting Minimum SRI ÷ 0.75) + (Area of Vegetated Roof ÷ 0.5) = Total Roof Area