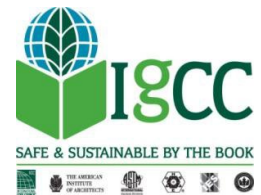


City of Scottsdale

2021 International Green Construction Code (IgCC)

Site Heat Island Mitigation Checklist

rev. 6-23-23



The intent of this checklist is to list the heat island mitigation options in Section 501.3.5.1 of the 2021 International Green Construction Code (IgCC). The section reads as follows:

501.3.5.1 Site hardscape. At least 50% of the *site hardscape* that is not covered by *solar energy systems* shall be provided with one or any combination of the following:

- ☐ Existing trees and vegetation or new *biodiverse plantings of native plants and adapted plants*, which shall be planted either prior to the final approval by the *AHJ* or in accordance with a contract established to require planting no later than 12 months after the final approval by the *AHJ* so as to provide the required shade no later than ten years after the final approval. The effective shade coverage on the *hardscape* shall be the arithmetic mean of the shade coverage calculated at 10 a.m., noon, and 3 p.m. on the summer solstice.
- ☐ Paving materials with a minimum initial *solar reflectance index (SRI)* of 29. A default *SRI* value of 35 for new concrete without added color pigment is allowed to be used instead of measurements.
- ☐ Open-graded (uniform-sized) aggregate, permeable pavement, permeable pavers, and porous pavers (open-grid pavers). *Permeable pavement* and *permeable pavers* shall have a percolation rate of not less than 2 gal/min • ft² (100 L/min • m²).
- ☐ Shading through the use of structures, provided that the top surface of the shading structure complies with the provisions of Section 501.3.5.3.
- ☐ Parking under a building, provided that the *roof* of the building complies with the provisions of Section 501.3.5.3.
- ☐ Buildings or structures that provide shade to the *site hardscape*. The effective shade coverage on the *hardscape* shall be the arithmetic mean of the shade coverage calculated at 10 a.m., noon, and 3 p.m. on the summer solstice.

Table 1- Solar Reflectance for Standard Paving materials

Paving Material	SRI	Reflectance	Emissivity
Typical new gray concrete	35	0.35	0.9
Typical weathered* gray concrete	19	0.20	0.9
Typical new white concrete	86	0.7	0.9
Typical weathered* white concrete	45	0.4	0.9
New asphalt	0	0.05	0.9
Weathered asphalt	6	0.10	0.9
* Reflectance of surfaces can be maintained with cleaning. Typical pressure washing of cementitious materials can restore reflectance close to original value. Weathered values are based on no cleaning.			