



Fig 304.06(1): Example for Shaded Parking

APPLICABILITY

This regulation is applicable to all building types. Refer to Table 101.07(1) in Section One - Administration for detailed applicability levels.

IMPLEMENTATION

Solar Reflectance Index (SRI) as defined by ASTM E1980 (Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces), incorporates both reflectivity and emissivity. Standard black (reflectivity 5%, emissivity 90%) has an index of 0, and standard white (reflectivity 80%, emissivity 90%) has an index of 100. Materials with higher SRI absorb less heat and reduce the Urban Heat Island (UHI) effect. Shading of hardscape by permanent structures or plantings will also reduce the UHI effect, however the shading material must have a SRI equal to or greater than those specified in Table 304.01 (1).

This regulation requires the use of materials having an SRI of 29 or higher for at least 50% of the hardscape of any building development, including paving materials and vehicle parking spaces. Hardscape includes parking areas, roadways, paved courtyards and paths. Sample hardscape drawing is illustrated in fig. 304.06(2).

Open grid (porous pavers) pavement systems are defined as pavement that is less than 50% impervious. The system is typically composed of concrete or masonry units where at least 50% of the surface area consists of holes or openings that are filled with sand, gravel, other porous material, or vegetation. The use of an open grid structure reduces the amount of material, which absorbs heat, and so is a suitable means of reducing the UHI effect.

Manufacturers or suppliers of proprietary paving products should be able to provide DCL test report which detail the SRI value of their products. Indicative SRI values for some common paving materials are given in Table 304.06 (1).

Table 304.06 (1): SRI Values for Common Paving Materials

Materials	Typical SRI Value
New Asphalt	0
New Grey Concrete	35-50
New White Concrete	80-90

Note: To meet above requirements, new material should be used.