



concrete solutions

for sustainability

resiliency

Concrete is known for its longevity. With designs lasting over 50 years for pavements and 100 years or greater for structures, it stands in the face of natural disasters. It resists high winds, fires, floods, and winter storms that occur in Iowa every year. It is naturally resistant to insects and vegetative growth.

Saferooms not only protect against natural disasters but human threats and blasts as well.



environmentally friendly

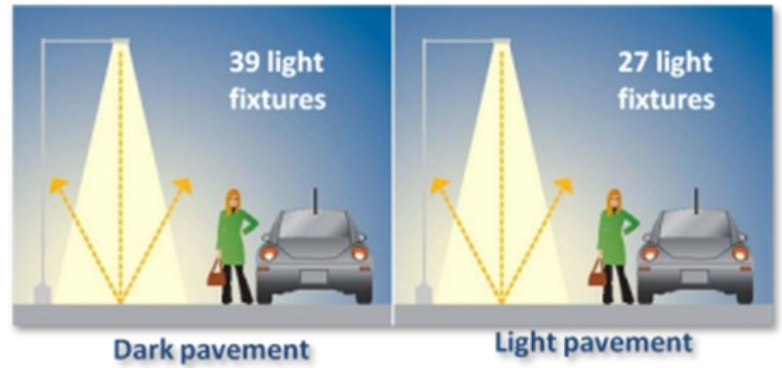
Concrete is made from Iowa's resources: cement, rock, sand, and water. Although cement production accounts for the majority of CO₂ emissions from concrete, nationally about 1.5%, there are new technologies to offset the amount of carbon. The Portland Cement Association has set a goal to be carbon neutral by 2050. Carbon reducing strategies include the use of type II cement, supplementary cementitious materials, CarbonCure (injecting captured carbon into fresh concrete), and reduced cement mixes.

Concrete also sequesters CO₂ over its lifetime, meaning carbon dioxide is absorbed from the atmosphere which effectively counters greenhouse gas emissions. Concrete can also be recycled to be used as aggregate subbase, pipe bedding, or incorporated back into the mix as part of the design. All these proactive strategies result in concrete continuing to be the most used and recycled material in the world.

Build with concrete for a more sustainable future.

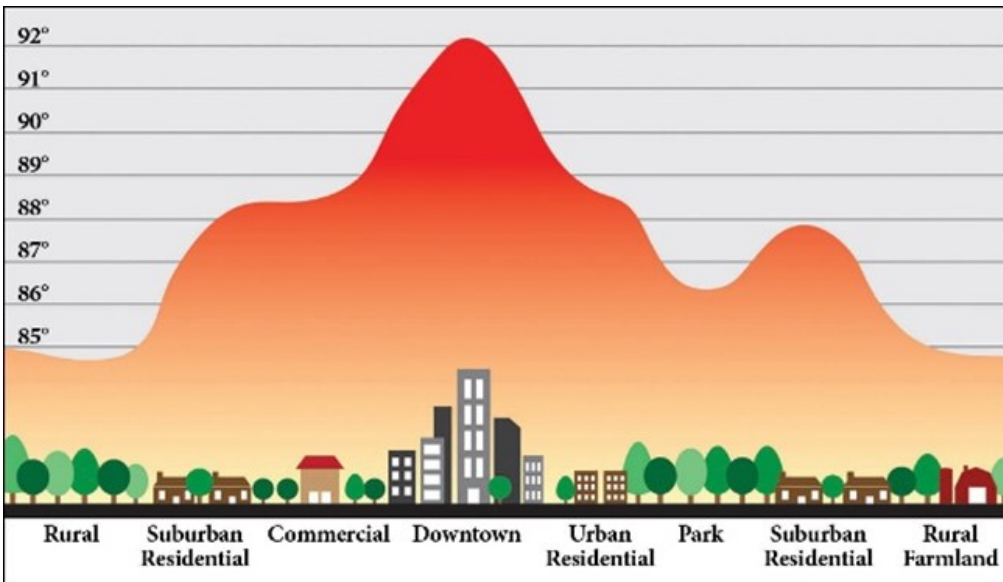
energy efficient

Concrete provides for customer and tenant safety and saves energy at the same time. With its lighter colored surface, concrete reflects light up to three times more than a darker material such as asphalt. Fewer fixtures are necessary to light a concrete parking area or street, which translates to energy efficiency. It also has a much cooler surface temperature to reduce the urban heat-island effect and offset greenhouse gas emissions. Simply lowering air temperatures by 5° F reduces air conditioner usage by 18%.



Concrete pavement is rigid. This leads to increased vehicle fuel efficiency thereby reducing the amount of carbon monoxide in the atmosphere. Studies by MIT and NRC Canada found similar results that show rigid pavements reduce the amount of fuel consumption in trucks by up to 7%.

Increased reflectance reduces the electricity required for lighting at night. To maintain the specified illumination, for example, a concrete roadway will require 20-30% fewer light fixtures per unit length compared to a dark colored surface.



**Be cool with concrete.
Concrete uses less
energy to illuminate
and cool your home
or business.**

resources

We can help, too. The Iowa Concrete Paving Association and Iowa Ready Mixed Concrete Association, also known as the ConcreteState, are non-profit organizations that provide information and expertise to discuss alternatives, sustainable mix designs, review specific projects, and furnish budget estimates.