LEED Credit Information

Developed by the U.S. Green Building Council (USGBC) in 1998, LEED® is a voluntary system of design for buildings and sites. It provides a rating system encouraging the use of technologies that reduce energy and conserve non renewable resources. LEED® was launched in an effort to develop a “consensus-based, market-driven rating system to accelerate the development and implementation of green building practices.” See the chart below for LEED® point summaries for concrete masonry units, segmental retaining walls, and paver products.

How Concrete Masonry and Hardscape Products Qualify for LEED Points

SS - Sustainable Sites		
Prerequisite	Construction Activity Pollution Prevention	
Goal	The goal is to reduce pollution generated by construction activities, such as erosion, waterway sedimentation, and dust generation.	
Contributions	Grid pavers can be used as a driving surface to reduce dust generation and dirt tracking which leads to sedimentation.	Pavers
Credit 2		
Goal	The goal is to protect undeveloped land and preserve habitats by channeling development to urban areas with existing infrastructure.	
Contributions	The use of both concrete masonry units and segmental retaining wall units can contribute, as they are modular and relatively small, so are well-suited for use on small and irregularly shaped lots. The reduction of large material and equipment staging areas and the reduced requirment of large pieces of equipment is important when developing infill lots in urban areas.	CMU SRW
Credit 5.1	Site Development: Protect or Restore Habitat	
Goal	The goal is to conserve existing natural areas and restore damaged areas to provide habitat and promote biodiversity.	
Contributions	Restore erosion prone areas of the site with grid pavers, which will retain soil while promoting growth of native plantings.	Pavers
	Use segmental retaining walls (SRWs) to maximize site usage and thereby reduce the total percentage of site use for development.	SRW
Credit 5.2	Site Development: Maximize Open Space	
Goal	The goal is to conserve existing natural areas on the project site by maximizing the amount of open space relative to the development footprint.	
Contributions	For urban projects that earn Sustainable Sites Credit 2, pedestrian-oriented hardscape areas, such as those constructed with concrete pavers, can contribute towards this credit.	Pavers
Credit 6.1	Stormwater Design: Quality Control	
Goal	The goal is to reduce the amount of stormwater runoff.	
Contributions	Limit stormwater runoff by using pervious or grid pavers to minimize impervious surfaces. The stone filled gaps and joints in the pavement provide 100% surface permeability allowing stormwater to be absorbed into the base materials gradually recharging the underlying groundwater.	Pavers
Credit 6.2	Stomwater Design: Quality Control	
Goal	The goal is to improve the quality of the runoff by providing filtration or other stormwater treatment	
Contributions	Permeable/Pervious pavers filter ground water as it passed through the joints and base material.	Pavers
Credit 7.1	Heat Island Effect	
Goal	The goal is to reduce heat islands and minimize the resulting impacts on microclimate and human and wildlife habitat.	
Contributions	Pavers with a Solar Reflectance Index (SRI) of at least 29, such as using light-colored pavers vs asphalt (SRI of new gray concrete = 35) to reflect heat instead of absorbing it.	Pavers
	Open grid pavement system with grass in the gaps.	Pavers

EA - Energy and Atmosphere		
Prerequisite	Minimum Energy Performance	
Goal	The goal is to establish a minimum level of energy efficiency for the proposed building and systems to reduce the environmental and economic impacts.	
Contributions	Concrete masonry has a unique quality known as thermal mass, or the ability to store heat. The energy efficiency of this quality is recognized by ASHRAE Standard 90.1 and can be used to achieve the required energy efficiency thresholds. The ways this quality affect energy efficiency are the shifting of peak heating and cooling loads to non-peak hours; the reduction of peak heating and cooling loads; the reduction in HVAC systems; and a moderation in interior temperature swings.	CMU
Credit 1	Optimize Energy Performance	
Goal	The goal is to achieve increasing levels of energy performance beyond the prerequisite standard to reduce environmental and economic impacts associated with excessive energy use.	
Contributions	Concrete masonry has a unique quality known as thermal mass, or the ability to store heat with very little change in temperature. The energy efficiency of this property is recognized by ASHRAE Standard 90.1 and can be used to achieve the energy efficiency thresholds mentioned on the previous slide. The ways this property affect energy efficiency are the shifting of peak heating and cooling loads to non-peak hours;the reduction of peak heating and cooling loads; the reduction in HVAC systems; and a moderation in interior temperature swings.	CMU

MR - Materials and Resources		
Credit 1.1	Building Reuse: Maintain Existing Walls, Floors and Roof	
Goal	The goal is to achieve increasing levels of energy performance beyond the prerequisite standard to reduce environmental and economic impacts associated with excessive energy use.	
Contributions	Concrete masonry buildings, because of their exceptional durability, lend themselves very well to renovation rather than teardown. The strategy helps conserve natural resources, retain cultural resources, reduce waste, and reduce the environmental impacts of materials, manufacturing, and transport.	CMU
Credit 1.2	Building Reuse: Maintain Interior Nonstructural Elements	
Goal	The goal is to extend the lifecycle of existing building stock, conserve resources, retain cultural resources, reduce waste and reduce environmental impacts of new buildings as they relate to materials, manufacturing, and transport.	
Contributions	Concrete masonry buildings, because of their exceptional durability, lend themselves very well to renovation rather than teardown. The strategy helps conserve natural resources, retain cultural resources, reduce waste, and reduce the environmental impacts of materials, manufacturing, and transport.	CMU
Credit 2	Materials and Resources: Construction Waste Management	
Goal	The goal is to divert construction and demolition debris from disposal in landfills and incineration facilities, to redirect recyclable recovered resources back to the manufacturing process, and reusable materials to appropriate.	
Contributions	Strategies include redirecting broken or damaged concrete products back to the manufacturing process. Concrete and masonry and hardscape products that are not used and are reusable can be donated or redirected to another project.	CMU SRW Pavers
Credit 3	Materials and Resources: Material Reuse	
Goal	The goal is to reuse materials and products to reduce demand for virgin materials and reduce waste, thereby lessening impacts associated with the extraction and processing of virgin resources.	
Contributions	Some concrete masonry products such as SRW units, and pavers can often be removed	SRW Pavers

	from one location and reused in another.	
Credit 4	Materials and Resources: Recycled Content	
Goal	The goal is increase the demand for materials with recycled content and to lower the demand for virgin materials.	
Contributions	The inert nature of masonry lends itself well to incorporating recycled materials. Concrete masonry units are routinely manufactured with by products from other industries as well as some post-consumer materials.	CMU Pavers SRW
Credit 5	Materials and Resources: Regional Materials	
Goal	The goal is to increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the use of indigenous resources and reducing the environmental impacts resulting from transportation.	
Contributions	Concrete masonry units are typically manufactured very close to the point-of-use. Also the raw materials that are used in the manufacturing of concrete masonry units are typically extracted close to the production facility including the recycled materials that are often incorporated into the product.	CMU Pavers SRW

ID - Innovation in Design		
Credit 1	Innovation in Design	
Goal	The goal is to provide design teams and projects the opportunity to achieve exceptional performance above the requirements set by the LEED Green Building Rating System and/or innovative performance in Green Building categories not specifically addressed by the LEED Green Building Rating System.	
Exemplary Performance Contribution	**Site Development** - an additional point can be achieved by having a larger percentage of the site undisturbed or restored than the original credit. SRW and paver units can assist in minimizing site disturbance and restoring erosion prone areas. **Stormwater Design** - using paver units can assist in reducing and improving stormwater to increase the requirements in the original credits. **Heat Island Effect** - using high-albedo or open grid paver units on all non-roof impervious surfaces will yield an additional point. **Optimizing Energy Performance** - using concrete masonry walls strategically can assist in achieving the 50% efficiency level needed to get this additional point. **Construction Waste** - crushing and reusing concrete masonry materials can assist in accomplishing the 95% diversion from landfill threshold established for this credit. **Material Reuse** - salvaging paver and SRW units can make the 15% material reuse level attainable. **Recycled Material** - a 30% recycled content level will yield a point.	CMU Pavers SRW
Innovation Contribution	To earn these credits, the design team must develop their own criteria and document the performance. Concrete masonry can contribute in a variety of ways. **Durability** - One of the most obvious characteristics of concrete masonry is its durability and long life expectancy, with minimal care, upkeep, and maintenance. Each of these factors contributes to a building's lasting beauty, comfort, convenience, economy, and returns benefits to the environment when concrete masonry is used. **Low/No VOCs** - Unpainted concrete masonry is not currently recognized under the LEED low-VOC credit (Environmental Quality credit 4.2). However, the use of unpainted masonry may be able to quality under a LEED interpretation ruling for that credit.	CMU Pavers SRW

	Acoustics - Currently there isn't a sound level requirement for LEED for New Construction. By using IEQ credit 9 in LEED for Schools as a guide an ID credit could be developed taking advantage of concrete masonry's acoustical properties. **Mold Inhibitor** - Using the Mold Prevention credit in LEED for Schools, a project team could develop an ID credit capitalizing on concrete masonry's natural ability to resist mold growth due to it not being a food source for mold.	

NOTE: LEED® point explanations taken from Concrete Masonry Designs Magazine