

Using brick can help a building achieve points toward Green certification. Listed below are some of the ways brick can directly and indirectly influence certification points. National Green Building Standard ICC-700-2008; Threshold Point Ratings for Green Buildings: Emerald=697, Gold=558, Silver=406, Bronze=222

## Site Design and Development (SD)

### SD 403.5 Storm Water Management - up to 5 points

Permeable pavements using clay pavers are a low-impact development technique for managing storm water. Where they are selected/specified to manage storm water, this practice awards points as follows:

- Less than 25 percent - 1 point
- 25 percent to 75 percent - 3 points
- Greater than 75 percent - 5 points

### SD 403.6 Landscape Plan - up to 4 points

Clay pavers can be used in a landscape plan instead of all turf areas to limit water and energy use while preserving or enhancing the natural environment. Points are awarded for this practice where the percentage of all turf areas is limited as part of the landscaping as follows:

- 0 percent - 4 points
- > 0 percent to < 25 percent - 3 points
- 25 percent to < 50 percent - 2 points
- 50 percent to 75 percent - 1 point

### SD 403.9 Existing Buildings - 6 points

Existing building(s) and structure(s) made of brick masonry is/are preserved, reused, modified, or disassembled for reuse or recycling of building materials.

## Lot Design, Preparation and Development (LD)

### LD 503.4 Storm Water Management - up to 5 points

Permeable pavements using clay pavers are a low-impact development technique for managing storm water. Where they are selected/specified to manage storm water, this practice awards points as follows:

- Less than 25 percent - 1 point
- 25 percent to 75 percent - 3 points
- Greater than 75 percent - 5 points
- Light-colored hardscaping: Horizontal hardscaping materials are installed with a solar reflectance index of 29 or greater

### LD 505.2 Heat Island Mitigation - 4 points

Any combination of the following strategies are provided for a minimum of 50 percent of the horizontal surface area of the hardscape:

- Light-colored hardscaping: Horizontal hardscaping materials are installed with a solar reflectance index of 29 or greater.

## Resource Efficiency (RE)

### RE 601.7 Site-Applied Finishing Materials - 2 or 5 points per each material

Building Materials or assemblies are utilized that do not require additional site-applied material for finishing.

- 90 percent or more of the installed building material or assembly listed below - 5 points
- 50 percent to less than 90 percent of the installed building material or assembly listed below - 2 points

### RE 601.8 Foundations - 3 points

Foundation types that require less material are designed and constructed. *Brick masonry pier and panel foundations meet this practice.*

### RE 601.9 Above Grade Wall Systems - 4 points

This practice is awarded for construction brick masonry walls which provide sufficient structural and thermal characteristics above grade for a minimum of 75 percent of the gross exterior wall area of the building.

### RE 602.8 Termite - Resistant Materials - up to 6 points

Buildings in areas where the probability of termite infestation exists can meet this practice by installing brick exterior cladding and clay pavers for exterior decks. Brick masonry for structural walls and floors also qualify. The building materials for the foundation, all structural walls, floors, concealed roof spaces, exterior decks, and exterior claddings within the first 2 feet (610 mm) above the top of the foundation.

- In areas of slight to moderate termite infestation probably [as defined by Figure 6(3)] - 2 points
- In areas of moderate to heavy termite infestation probability [as defined by Figure 6(3)] - 4 points
- In areas of very heavy termite infestation probability [as defined by Figure 6(3)] - 6 points

### RE 603.2 Salvaged Materials - 3 points

This practice is awarded where reclaimed brick or clay pavers are used and the total material and labor cost of the brick or pavers equals or exceeds 1 percent of the total construction cost.

# Earning Green Rating Points with Brick

## Residential Construction using NAHB ICC 700-2008

### RE 604.1 Recycled Content - up to 6 points

Building materials with recycled content.

- 25 percent to less than 50 percent - 1 point per minor component; 2 points per major component
- 50 percent to less than 75 percent - 2 points per minor component; 4 points per major component
- Greater than 75 percent - 3 points per minor component; 6 points per major component

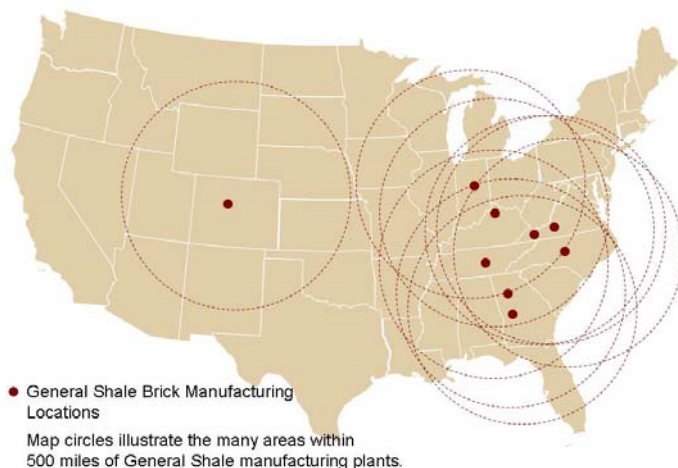
### RE 607.1 Resource-Efficient Materials - 3 points for each material

Products containing fewer materials.

- Lighter, thinner brick with bed depth less than 3 inches and/or brick coring of more than 25 percent.

### RE 608.1 Indigenous Materials - 2 points per material

Awarded where local materials found within 500 miles of the project are used for major elements of the building. General Shale's regional plant locations provide a wide coverage of areas.



### EE 704.3.1.3 Exposing Internal Thermal Mass for Passive Cooling - 1 point

Awarded for incorporating exposed internal thermal mass which is a minimum of three inch thickness for passive cooling. Thermal mass may consist of concrete, brick and/or tile that are fully adhered to a masonry base or other masonry material and is in accordance with one or a combination of the following:

- A minimum of 1 square foot of exposed thermal mass of floor per 3 square feet of gross finished floor area.
- A minimum of 3 square feet of exposed thermal mass in interior walls or elements per square foot of gross finished floor area.

*Brick flooring or interior brick walls can meet this requirement.*

### EE 704.3.1.4 Floor With Thermal Mass for Passive Solar Heating - one of three items for 4 points

In addition to providing sun-tempered design features, provide additional thermal mass for any room with south-facing glazing of more than 7 percent of the finished floor area is provided in accordance with the following:

- Thermal mass is solid and a minimum of 3 inches in thickness. Where two thermal mass materials are layered together (e.g., ceramic tile on concrete base) to achieve the appropriate thickness, they are fully adhered to (touching) each other.
- Thermal mass directly exposed to sunlight is provided in accordance with the following minimum ratios:
  - Above latitude 35 degrees: 5 square feet of thermal mass for every 1 square foot of south-facing glazing
  - Latitude 30 degrees to 35 degrees: 5.5 square feet of thermal mass for every 1 square foot of south-facing glazing
  - Latitude 25 degrees to 30 degrees: 6 square feet of thermal mass for every 1 square foot of South-facing glazing
- Thermal mass not directly exposed to sunlight is permitted to be used to achieve thermal mass requirements of this section based on ratio of 40 square feet of thermal mass for every 1 square foot of south-facing glazing. *Brick floor can meet this requirement.*

## Energy Efficiency (EE)

### EE 703.1.3 Mass Walls - up to 6 points

Practice is awarded where more than 75 percent of the above-grade exterior opaque wall area of the building is a mass wall which utilizes thermal mass.

- Climate Zones 1, 2, 3, 4 except marine, and 5 dry - 4 points for mass walls 3 to less than 6 inches thick; 6 points for mass walls 6 inches or more thick
- Climate Zones 4 marine, 5 except dry, and 6 - 3 points for mass walls 3 to less than 6 inches thick; 5 points for mass walls 6 inches or more thick

### EE 703.2 Masonry Fireplaces - one of several items for 15 points (3rd party verification); 3 points (no 3rd party verification)

Masonry fireplaces equipped with gasketed doors, outside combustion air and a means of sealing the flue provide heat without compromising indoor air or heat loss.

## Indoor Environmental Quality (EQ)

### EQ 901.2.1 Fireplaces - 4 points

#### Masonry Heaters - 6 points

Fireplaces and masonry heaters are code-compliant, vented to the outdoors, and have adequate combustion and ventilation air provided to minimize spillage or back-drafting. They must also be in accordance with the following, as applicable.

- Wood-burning fireplaces are equipped with gasketed doors designed to operate with the doors closed, outside combustion air, and a means is provided for sealing the flue to minimize interior air (heat) loss when not in operation.
- Masonry heaters designed and constructed in accordance with ASTM E1602.