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## The RetroPlate® System and LEED Certification

### **ENERGY & ATMOSPHERE CREDIT**

#### **Energy & Atmosphere Credit 1: Optimize Energy Performance**

Intent: *Achieve increasing levels of energy performance. Demonstrate a percentage improvement in the proposed building performance rating compared to the baseline building performance rating. (2–10 points)*

RetroPlate® can contribute points depending on the minimum energy cost savings percentage of the overall building. RetroPlate significantly maximizes the entire building's energy efficiency design through two main sources – heating/cooling loads and lighting reduction. The RetroPlate System maximizes the inherent thermal properties of concrete, reducing the cooling load and heating load of the building. Furthermore, RetroPlate increases the light reflectivity by up to 30%, reducing lighting requirements. This saves money and energy on the initial cost of lighting installation and long-term electrical needs.

### **MATERIALS & RESOURCES CREDIT**

#### **Materials & Resources Credit 1.1, 1.2 and 1.3: Building Reuse**

Intent: *Extend the life cycle of existing buildings.*

RetroPlate® can contribute points depending on the percentage of overall flooring that is polished. The RetroPlate System will last the lifetime of the building and does not have to be removed or replaced if the building is sold or remodeled. In renovation projects, the polishing of the existing floor allows for the reuse of existing materials.

#### **Materials & Resources Credit 3.1 and 3.2: Materials Reuse**

Intent: *Reuse building materials and products in order to reduce demand for virgin materials and to reduce waste.*

RetroPlate® can contribute points by reusing the existing concrete floor at a cost of at least 5–10% of the total value of materials on the project.

#### **Materials & Resources Credit 4.1 and 4.2: Recycled Content**

Intent: *Increase demand for building products that incorporate recycled content.*

RetroPlate® can contribute points by using fly ash and/or recycled glass in the concrete mixture to be polished. The fly ash should not exceed 25% of the total cement content, as RetroPlate does need enough cement for its chemical reaction (densification). *Note: The RetroPlate densifier does not contain any recycled content, but the containers (drums) are 100% post-consumer recycled content.*

#### **Materials & Resources Credit 5.1 and 5.2: Regional Materials**

Intent: *Increase demand for building materials and products that are extracted and manufactured within the region (within 500 miles of project site).*

RetroPlate® can contribute points if the project is within 500 miles of where RetroPlate is manufactured (Springville, Utah).

## **INDOOR ENVIRONMENTAL QUALITY CREDIT**

### **Indoor Environmental Quality Credit 4.1: Low-Emitting Materials**

Intent: *Reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well being of installers and occupants.*

RetroPlate® can contribute points because the sealer contains no Volatile Organic Compounds - 0 g/L (VOC-free) and contains no solvents. It also eliminates the need for floor adhesives.

### **Indoor Environmental Quality Credit 7.1 and 7.2: Thermal Comfort**

Intent: *Provide a comfortable thermal environment and provide assessment of building thermal comfort over time.*

RetroPlate® can contribute points by retaining the inherent thermal properties of concrete to reduce the cooling load and heating load of the building, thus increasing the thermal comfort of the occupants. The RetroPlate polished concrete increases the benefits of in-floor radiant, or solar heating and cooling systems by maximizing the building envelope's thermal mass.

## **INNOVATION & DESIGN PROCESS CREDIT**

### **Innovation & Design Process Credit 1 - 1.4: Innovation in Design**

Intent: *To provide design teams and projects the opportunity to be awarded points for exceptional or innovative performance.*

RetroPlate® polished concrete avoids floor coverings and coatings. This "naked architecture" goes beyond and above LEED requirements. Maintenance of a RetroPlate floor is simple and very environmentally friendly, using water or a water-based detergent and reducing the floor's life cycle cost. The sealed surface provides allergy relief to occupants because it does not harbor pollen or mold. RetroPlate will perform well under conditions of temperature change, and wet conditions, in case of natural disaster or other emergency.