

# G.R.E.E.N.

Green Roof Environmental Evaluation Network

Saint Louis Metalworks Company is inviting interested parties to participate in the collaborative effort, Green Roof Environmental Evaluation Network, or G.R.E.E.N., to research various aspects of the green roofing concept as they pertain specifically to the Midwest region. Phase I of this research project will be hosted by Southern Illinois University at Edwardsville under the guidance of Dr. William Ratzlaff of Biological Sciences, Dr. Susan Morgan of Department of Civil Engineering, and Dr. X. Terry Yan of Department of Mechanical and Industrial Engineering. Though several university based studies are underway in other parts of the United States and Canada, the Midwest presents a unique microclimate with characteristics that may render the data generated by these studies irrelevant to this region. The Midwest is infamous for hot humid summers as well as for extreme cold temperatures for periods during the winter. The rooftop in the Midwest has long been known to the roofing industry as one of the harshest environments for roofing materials. While green roofs, by reducing the impact of the environment, have the potential to dramatically increase the lifespan of roofing materials, the Midwest presents one of the most challenging environments for green roof design and survival. You are invited to join us as we attempt to fully understand green roof potential and to meet the unique challenges presented by the Midwestern climate.

G.R.E.E.N. will strive to evaluate various green roof designs and techniques to determine those that provide the greatest level of success for our region. We need to determine what soil depths are required for a variety of plants and how to design green roofs to best benefit the building owner and the community. Among the possible benefits are improved insulating qualities provided by the green roof and subsequent reduced heating and cooling cost, storm water retention and reduced runoff quantities, reductions in storm water contaminate levels, and as previously noted, increased life spans for roofing materials. This research program will strive to quantify the heating and cooling cost savings that can be expected from a green roof installation, how much storm water runoff is retained and for how long after a heavy storm, and how varying depths and plant selections impact these quantities. Additionally, we will begin to conduct long term testing to determine how much longer a roof system under a green roof will last compared to a roof system left exposed to the elements. This research project will also conduct performance testing to determine which roofing materials perform best for Midwest green roof installations.

G.R.E.E.N. is soliciting the participation of area universities, roofing contractors and suppliers, greenhouses and plant growers, landscape contractors and architects, stakeholders from area industry and retailers, government agencies, and interested individuals from the private sector. Participants are encouraged to monitor ongoing research at [www.green-siue.com](http://www.green-siue.com) and to comment on the useful application of the generated data at [greensiue@sbcglobal.net](mailto:greensiue@sbcglobal.net). Though membership in G.R.E.E.N. is free of charge, the research activities are completely donation dependent. Donations of plant and roofing materials, testing equipment, time conducting research activities, and money towards expenses will be greatly appreciated. To become a participant simply contact Saint Louis Metalworks Company and let us know you would like to participate.

Sincerely,

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