

Introduction

Maintaining the pace of growth and development in the Green Country area requires those with a vested interest in the design, development, and construction community adopt new ideas and employ new methods that will insure such growth can be sustained. Low Impact Development (LID) and Green Infrastructure (GI), essentially a collection of options for the developer and design professional's toolbox, has been proven to not only improve the sustainability of development but to also potentially lower the cost of development. These techniques can provide benefits in water quality, natural habitat and flood control, and in the reduction of long-term maintenance costs of storm water management while increasing quality of life and the livability of communities.

The Green Country Sustainability Forum was formed to provide exposure to the full range of these sustainability practices to others in our area, to encourage their adoption through education and possible code revision, and their adaptation where needed for the conditions found in our local environment, which offers many challenges. Our Forum strives to foster creativity in both sustainable development and the regulatory structure that enables it.

How GCSF “defines” green infrastructure and low impact development

Green infrastructure is an approach that communities can choose to maintain healthy waters, provide multiple environmental benefits and support sustainable communities. Unlike single-purpose gray storm water infrastructure, which uses pipes to dispose of rainwater, green infrastructure uses vegetation and soil to manage rainwater where it falls. By weaving natural processes into the built environment, green infrastructure provides not only storm water management, but also flood mitigation, air quality management, and much more.

Low impact development (LID) is an approach to land development (or re-development) that works with nature to manage stormwater as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product. There are many practices that have been used to adhere to these principles such as bioretention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavements. By implementing LID principles and practices, water can be managed in a way that reduces the impact of built areas and promotes the natural movement of water within an ecosystem or watershed. LID should also attempt to reduce materials use, attempt to source locally or regionally, reuse and recycle materials when possible, and purchase from environmentally recognized manufacturers.

Competition Objectives

Provide a hands-on learning experience through which design, construction and development professionals in the Green Country area will gain meaningful experience in working with Low Impact Development methodologies that can be applied to their everyday practices.

Demonstrate to local design professionals, real estate developers, civic groups, and the general public the **economic, environmental and marketing benefits** that are available to entities that adopt and innovate with respect to sustainable site development.

Identify and attempt to remove potential barriers to the implementation of low impact development techniques in the area, while illustrating practicality by showing what is feasible.

Encourage through the body of work represented by the entries submitted, **greater use of these beneficial techniques for sustainable development** in our area and highlight local incentives where applicable.

Recognize the participants and finalist design teams for their creativity, innovation and application of sustainable site design.

Prepare contestants for potential upcoming regulations requiring low impact development techniques by giving them an open forum to explore ideas and design methods that strive to accelerate the implementation of innovative low impact development technologies.

Eligibility

Each entry must come from an integrated design team consisting of a minimum of three **key licensed** participants, **including at least one Licensed engineer, one Architect and one Landscape Architect**. The Architect member may be replaced by an engineer with transportation expertise on teams competing in the Green Roadway design challenge.

The inclusion of team members from the Land Planning, Development, Homebuilding and Construction disciplines, including students, is strongly encouraged.

Individuals may not participate on more than one team competing in the same Design Challenge Category. There are no limits on the number of individuals from a single firm that may participate in the competition as members of teams.

Teams with members who are based outside the [Green Country](#) area are welcome, but at least one member of each team must be verifiably based in the region. A Green Country-based member must be one of the key design professionals.

Competition Calendar

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| • November 14 th , 2013 | Registration opens & competition begins. Kickoff event - Mid Continent Tower 3:30-5 |
| • February 14 th , 2014 | Registration closes at midnight |
| • February 28 th , 2014 | Entry submittals must be received by 4:00 PM. Competition ends |
| • March 14 st , 2014 | Finalists announced. |
| • April 3 rd , 2014 | Finals Event and Awards Program at Hard Rock Casino and Hotel |

Registration

- [Click here for Registration Form.](#)
- A Registration fee of \$250 must accompany the completed Registration Form.
- Each Registration Form must:
 - Indicate the Design Project Challenge Category that will be the subject of the team's entry
 - Identify at least two of the required design professional team members
 - In the event that individuals are not able to be identified at the time of Registration, a firm name may be substituted
- In the event that all team members are not identified on the original Registration Form, entry submissions must include a revised Registration Form, which includes any individuals who were not originally listed on the original Registration Form and must include all team member information requested, including signatures.
- Upon acceptance of the Registration, an Identifying Number will be provided to the team via e-mail. This number must be placed on ALL materials submitted, including the first page of the electronic submission, and on any and all correspondence. No other identifying marks are allowable.

Design Goals

- Conserve natural resources that provide natural functions associated with controlling and filtering storm water.
- Use decentralized, small-scale landscape features and LID Integrated Management Practices (IMP) to work as a system to:
 - Reduce the amount of runoff by mimicking the natural hydrologic function of the site and matching pre-development hydrology.

- Minimize the use of and/or reduce the size of pipe and other centralized control and treatment infrastructure.
 - Lower the total cost of development when compared to traditional infrastructure design.
- Minimize and disconnect impervious surfaces, lengthen time of concentration and promote bio-filtration of runoff to improve the quality of storm water leaving the site.
- Minimize or eliminate the use of potable water resources needed for irrigation and where practical provide for the reuse of rain water.
- Use enhanced quality of life values and reduced maintenance costs inherent in LID practices to increase marketability of the development and long-term property values.
- Attempt to reduce materials use, source materials locally or regionally, reuse and recycle materials, purchase from environmentally recognized manufacturers, and incorporate innovative designs.
- Correctly identify current codes that prohibit the construction or implementation of your prescribed LID techniques.

Design Challenge Categories

Each design challenge represents an actual property for which the owner has an interest in developing utilizing the sustainable methods to be showcased in this competition. In an effort to provide the opportunity for the broadest professional participation, entries will be accepted in the following three Challenge categories.

Mixed Use Development

- [Click here for Criteria and program for this project.](#)
- Design Challenge property data is provided by Brown and Perkins, LLC.
- The challenge project is Elm Ridge located at E. 51st Street S. and S. 161st E. Ave. Broken Arrow, OK, 74012.

Commercial Green Street

- [Click here for Criteria and program for this project.](#)
- Design Challenge venue will be provided by City of Tulsa Engineering Services.
- This challenge will include 6th Street in the Pearl District, from Peoria to Rockford.

Urban Residential Redevelopment

- [Click here for Criteria and program for this project.](#)
- Design Challenge venue is sponsored by Phil Marshall Properties, Inc. and Lindsay Perkins Development.
- The project is Barnard Trace located at 2324 E 17th Street, Tulsa, OK 74104.

Available information such as Site Plans, maps, soils information, pre-development conditions, drainage outfall and other available information are provided for each category, and represent actual data from the site involved.

Submission Requirements

- All entry submissions must be received no later than 4:00 PM February 28, 2014.
- Each entry must be submitted as follows:
 - At least one, but no more than two foamcore presentation boards (30”x 40”), on which the team’s key concepts and elements of the design are presented visually, including a summary of the economic and hydrologic modeling results. Selected boards will be

- displayed, with identifying team information, at the Finals Event and Awards Program, and may be used in a traveling exhibit, following the competition.
- An electronic submission package must be provided on CD or USB drive, in Power Point (PPT) format which includes:
 - All images and data contained on the foamcore presentation boards submitted with the entry.
 - Images of all drawings, plans and details.
 - A written overview, presenting the design team's concept.
 - Justification for the hydrologic/drainage modeling used to develop design conclusions
 - An explanation of project costs and an economic comparison with the same project if developed using traditional methods.
 - Submission plan sets must include at a minimum: Site Plans, Drainage Plans, Landscape and Irrigation Plans, Elevations, Details.
- Electronic submissions are limited to a maximum of 30 Power Point pages.
- Submissions must include no identifying features or marks which might reveal the identity of any member of the design team or any organization that may be represented by members of the team.
- Submissions must include a revised Registration Form, which includes any team members who were not originally listed on the original Registration Form and must include all team member information requested, including signatures. This form must be submitted in a sealed envelope and marked on the outside with the team's identifying number.
- Submissions must also include an identification card (8.5"x11") containing team, and team member identification for display with the team's presentation boards at the Finals Event and Awards Program. These cards must also to be submitted in a sealed envelope on which the team's Identifying Number is prominently displayed.
- [A Submittal Guidelines \(PPT format\) may be viewed/downloaded by clicking here.](#) (available soon)

Expert Judging – Stage One

- The first round of judging for each Project Design Challenge will be conducted by a panel of five Expert Judges, each with pertinent experience and expertise.
- The Expert Judges will be professionals from categories such as:
 - **Licensed Engineer**
 - **Landscape Architecture**
 - **Low Impact Development**
 - **Architecture**
 - **Hydrology**
- Finalists will be determined by the scoring of the Expert Judges.
- For Finalists, the Expert Judges' scores will represent 80% of their total final score.

Finals Jury Presentations – Stage Two

- In the second stage of the competition, Finalists will present their entries, verbally and through use of Power Point, to an esteemed local Jury Panel made up of interested and influential leaders in the Houston area from the development, civic and government community.
 - Tickets will be available to the public for the Finals Event and Awards Program and the event will be highly publicized and promoted.
 - [Click here for tickets and more information on the finals Event and Awards Program](#) (link still to come)

- This event will bring together all contestants and other design, development and construction professionals as well as civic and governmental leaders from throughout the area.
- Selected entries, in addition to the Finalists' submissions will be displayed with team name and member identities, in the public areas of the hall utilized for this program. Attendees will be encouraged to arrive early to allow ample time to view all entries.
- Finalists must utilize a "Lightning Presentations Format" to present their design challenge solutions to the Jury Panel. This format is designed to make each presentation short, exciting and to the point, and will allow for participation of a maximum number of semi-finalists.
 - Each Finalist team will have up to 7 minutes to make their presentation.
 - Presentations will be stopped at exactly 7 minutes.
- The scores of the Jury Panel will account for 20% of the Total Final Score for each Finalist entry and will be combined with the Expert Judges scores from Stage One to determine the winners in each category.
- Tabulation of Jury Panel scores and Total Final scores, and the determination of winners will take place immediately after the finalists make their presentations.
 - [Click here for the Finals Jury panel listing and announcement \(link updated later\)](#)
 - A short intermission (approximately 15-30 minutes) while tabulations are made will provide attendees with time for networking, viewing of the presentation boards submitted by entrants and conversation.

Awards

- Presentation of Awards to the winners will be the highlight and culmination of the Finals Presentations and Awards Program.
- A cash prize in the amount of \$10,000 will be awarded to the winner in each Project Design Challenge Category.
 - Mixed-Use Development
 - The prize for this category is to be awarded by Lindsay Perkins from Lindsay Perkins Developments, LLC
 - Commercial Green Street
 - The prize for this category is to be awarded by a representative from the City of Tulsa
 - Green Roadway
 - The prize for this category is to be awarded by Phil Marshall from Phil Marshall Properties, Inc.