Low Impact Development & Green Infrastructure

Seminar Agenda

Salt Lake City, UT – January 12, 2012

8:30-10:00

Understanding and Implementing Principles of Low Impact Development

- Understanding the status quo: conventional development and stormwater management
- Drawbacks of conventional approaches
- Origins of low impact development (LID) concept
- Principles of LID
- Benefits of LID for builders and municipalities
  - Environmental benefits
  - Municipal
  - Public
  - Developers

10:00-10:15

Break

10:15-11:15

Low Impact Development Site Planning

- Environmental site design: natural resource assessment and evaluation
- LID site planning tools
- Development of site plan

11:15-12:30

Low-Impact Development Hydrology Considerations

- Defining hydrologic principles
- Identifying regional hydrologic considerations
- Hydrologic tools for LID
- Evaluating hydrologic outcomes

12:30-1:30

Lunch

1:30-3:30

Low Impact Development Integrated Management Practices

- Choosing and designing integrated management Practices (IMPs)
  - Bioretention
  - Filter strips
  - Vegetated buffers
  - Vegetated swales
  - Rain gardens
  - Infiltration trenches
  - Pervious concrete/permeable pavers
  - Dry wells
  - Filter strips
  - Level spreaders
  - Rain barrels
  - Cisterns

3:30-3:45

Break

3:45-4:15

Erosion and Sediment Control in Low Impact Development

- Identifying causes of erosion and sedimentation
- Steps for erosion and sedimentation control
- Environmental and regulatory considerations

4:15-5:00

Case Studies

Seminar Faculty

Bo Yang, Ph.D. *Assistant Professor at Utah State University*
Dr. Yang is an assistant professor in the Department of Landscape Architecture and Environmental Planning. His areas of interest are environmental planning and technology, stormwater management, and low-impact development, particularly focusing at community scales. He has a diverse background in architecture, landscape architecture, and urban planning. He has professional experience in both China and the U.S. and has been involved in projects of different scales and focuses. Dr. Yang has worked on several funded research projects on community planning and stormwater management. He has given presentations at national and international conferences and published in leading journals in the field (e.g., *Landscape and Urban Planning* and *Ecological Engineering*). Dr. Yang's doctoral study assessed Ian McHarg's ecological planning approach used in The Woodlands, Texas (a study funded by the USGS). This study was the first one that evaluated McHarg's untested ecological planning approach and demonstrated the substantial performance benefits in stormwater management. Funded by a federal fellowship in 2011, Dr. Yang was selected as one of the 10 research fellows from the landscape architecture faculty across the nation to conduct post-occupancy evaluation of exemplary design projects, in partner with leading design firms. Dr. Yang's current research is examining the impacts of different community planning approaches on stormwater quality and the long-term effectiveness of various low-impact development strategies. Funded by another grant, Dr. Yang is currently working with faculty and students in the Engineering Dept. at Salt Lake Community College to examine the performance of on-site stormwater management strategies used in Daybreak community in South Jordan (a renowned project by Design Workshop, Inc.).

Kristofor L. Kvarfordt, RLA, ASLA- *Cache Landmark in Logan*
Mr. Kvarfordt is the senior landscape architect and land planner at Cache Landmark. During his career has worked on a broad range of projects throughout Utah, Idaho, Nevada, and California. His experience includes large scale planning, trail and open space master planning, and detailed site development plans. He has had direct responsibility for management and construction observation for projects exceeding $10 million in site construction costs. Mr. Kvarfordt works closely with civil engineers and other project specialists to create plans that are well integrated into all the various components of a project. His expertise is on developing site solutions that meet the needs of the user, while integrating innovative stormwater collection, water sensitivity, treatment and re-use solutions. Mr. Kvarfordt worked as the project manager and landscape architect of record for Cache Valley's first LEED project. Since this time, Mr. Kvarfordt has developed many projects that provide alternative stormwater management solutions that focus on improving the water quality, reducing discharge off-site and increasing on-site storage capacities.