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"I enjoy land development because of its opportunities to design and shape infrastructure while positively impacting people's lives." - Scott Cramer, CEE graduate student

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The Land Development Design Initiative (LDDI) at Virginia Tech is starting an exciting new phase: we have a newsletter, which we are calling LDDI Bridges! The sheer number of things happening in this initiative is impressive and you deserve to know all about them.

Read about the new courses we continue to add in Land Development and news about the LDDI bulletin boards and sponsorships. We have special sections showcasing cool land development projects and spotlighting special folks like you who work in land development design.

The intended audience for the newsletter includes both the VT student body and participating professional engineers. We plan to publish LDDI Bridges electronically only, post it on our website and distribute it through email.

The website is now in re-design and we hope to have it in production by early August, just in time for the beginning of the Fall semester. The new site will include a complete makeover with many additional features and a new URL (www.ildi.net).

Many thanks to both Kevin Young and Ana Constantinescu for putting this newsletter together. I look forward to your feedback on how we can improve it.

Best wishes for a great summer!

VT LDDI Coordinator,

Randy Dymond

LDDI classes connect students with practitioners

by Ana Constantinescu

LDDI is bridging the civil engineering students and practitioners with a course portfolio that blends theory with real-world practice.

One of the new classes being offered, "Advanced Land Development Design," was taught by volunteer professional



Scott Cramer, CEE grad student, likes the potential of a career in land development.

engineers in the Spring 2007 semester. Students

welcomed this real-life approach to learning. "We spent a few hours each session to work in teams on our design projects.

This allowed class time for real work and gave the instructors a chance to interact with us," says Scott Cramer, a CEE

graduate student who took the class.

Another LDDI class, "Land Development Design," is a long standing senior-level course in the Civil and Environmental Engineering (CEE) department, which has undergone a successful makeover. The class is now taught by full time CEE faculty, but pairs student groups with professional mentors. "This arrangement is ideal for helping senior students transition from engineering students to practicing engineers," explains Kevin Young, course instructor and LDDI assistant coordinator.

A new, junior-level course, "Introduction to Land Development," will be offered next Spring semester. The one credit seminar class will give students the fundamentals of the land development design process, and will highlight a number of professional speakers.

"The three classes are just the beginning of LDDI's pledge to educating future practitioners," adds Kevin.

LDDI Advisory Board: Derrick Cave, Kimley-Horn & Associates

Each issue of *LDDI Bridges* will focus on key people who make LDDI happen.



"My goal in every project is for not only myself, but my team to learn something new, and to try new ideas. We cannot improve the manner in which we design for development if we are afraid to think out of the box."

- Derrick Cave, Sr. Vice President at Kimley-Horn and LDDI advisory board member

Derrick Cave is Senior Vice President at Kimley-Horn and a member of LDDI Advisory Board. A VT alumnus himself, Derrick knew he wanted to become a civil engineer in the 9th grade. He now has over 20 years of experience in the field and has completed land development projects in seven states.

What attracts you to CEE?

DC: I chose to be involved in the land development due to the wide variety of projects in which I could become involved and the impact I could have on the communities in which I lived. A well thought out and implemented land development project can provide for needed services within the community and become a focal point as well.

What are the highlights of your career?

DC: My career highlights include being part of the design team responsible for the design and construction of the Fairfax County Government Center complex (Fairfax, VA), a 1,000,000 square foot office building on 100 acres. The project included the design of stormwater management facilities, off-site roadway improvements including new roadways and widening of existing facilities.

I was also involved in the development of a 147 acre commercial/retail development at Dulles Town Crossing, which included a Wal-Mart, Sam's Club, Lowe's, and Best Buy.

What motivated you to become involved with the LDDI?

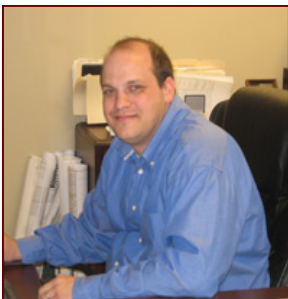
DC: My involvement with LDDI has been motivated both from a personal and professional standpoint. From a personal standpoint I view this as a way to give back to the University that provided me with the skill set necessary to have a successful career in CEE. I am the first college graduate from my family and all of the opportunities that have been made available to me during my 20 years since graduation begin with the education obtained at Virginia Tech.

From a professional standpoint, I have been interested in being involved in a program that would better prepare college graduates for a career in land development. Students that understand the overall land development design process are going to find that their ability to promote themselves and to accelerate their careers is incredibly enhanced if they are involved in this type of focused program. **Continued on page 4**

Alumni Spotlight: Justin Troidl, PE, Bowman Consulting

Bridging education to experience is key to a successful career

by Ana Constantinescu



"VT has a tough Civil program that teaches with real world applications."

- Justin Troidl, PE, Bowman Consulting

At 29 years old, Justin Troidl, PE is the Director of Engineering at Bowman Consulting's Fredericksburg, VA office, where he has been since he graduated from Virginia Tech's Civil and Environmental Engineering (CEE) department in 2000.

He admits that VT's CEE program played a significant part in his career success. "Graduating from a tough program that teaches with real world applications helped me secure the job I wanted," says Justin.

However, for a well-rounded professional, quality education is not all. Excellent communication and time management skills, attention to detail, and organization are a must for any junior engineer. According to Justin, these are all things that can be overlooked easily, but they make a great difference in one's career.

The transition from *learning* to *practicing* engineering was a smooth process for Justin, as VT provided him with an excellent background on the principles of engineering. But he still had to overcome a big challenge:

the amount of negotiation involved in land development. "In the real world, you are dealing with people, not text books. How fast your plan is approved depends greatly on how well you can negotiate with the reviewers," he admits.

Justin's project portfolio includes a variety of residential and commercial projects across Virginia, and a 500 lot residential undertaking called "American Village" in Irbil, Iraq.

As diverse as his projects may be, Justin tries to approach every one of them with the same framework. "Bowman Consulting has a set of design guidelines that direct use through the design process," he adds. This is a way of achieving consistent, high quality results for each project.

No matter his professional achievements, the project that is closest to Justin's heart is his family. "I have a two and a half year old son and another baby boy on the way. Spending time playing with my son means the world to me."

Balzer and Associates work on much needed commercial and residential project in Hanover Co., VA

edited by Ana Constantinescu

Balzer and Associates' project in Mechanicsville, VA - "*Creighton Commercial Subdivision*" - is providing the first leg of a north-south connecting road needed in this part of the Hanover County to relieve traffic congestion, while offering affordable housing in the area. This multi-project undertaking will also provide the surrounding residential areas with additional shopping and dining opportunities, while allowing the county to benefit from the necessary real estate taxes.

From an engineering standpoint, the project seeks to maximize the land use for both commercial and residential uses within the county ordinance. "We have designed major intersection improvements, while permitting the onsite wetlands, in addition to Hanover County's strict stormwater outfall requirements," explains Cameron Palmore, Vice President at Balzer. The firm also did the wetland delineation, wetland permitting and geotechnical design for the road, and a stormwater management pond.

What makes the *Creighton Commercial*

undertaking unique is the number of projects, clients, and development phases involved. "The road extension is scheduled to be a four lane divided roadway in the future, but the developer is only required to build part of that at this time. The road had to be designed as if it were in its final state and then construction plans developed for what is required to be built now," says Palmore.

Perhaps the biggest challenge was the design and approval of a pond destined to control and treat stormwater runoff for the entire property. The firm had to meet the county's strict outfall requirements which asked for a large storage volume. "We were also trying to maximize the permanent stored volume to get the highest pollutant removal efficiency possible," adds Palmore.

The first phase of the project, which includes the road extension, a townhouse site, and a restaurant, will be completed this summer. Future plans include offsite properties, as well as 12 acres of commercial and office developments.



Balzer and Associates rezoned the 41 acre property in Mechanicsville, VA for its multiple uses. Creighton Road was extended through the property to provide access to the newly created parcels.

Draper Aden develops sustainable site design on the Virginia Tech campus

edited by Kevin Young

Draper Aden Associates are currently working as a sub consultant to Hanbury Evans Wright Vlattas & Co. on renovations to Virginia Tech's Henderson Hall, in Blacksburg, VA. Extending beyond a typical revitalization effort, the project also features the construction of an experimental *Black Box* theater. Project tasks performed by Draper Aden include preparation of an Environmental Impact Report, topographic surveying, and all civil site design.

Located near the intersection of College Avenue and Draper Road, Henderson Hall is a highly visible site where land use transitions from the Virginia Tech campus to Blacksburg's downtown district.

"While public support for the renovations and new theater venue is strong, the high profile nature of the project introduced additional site design goals, most notably that of LEED® Silver Certification," adds Carolyn Howard, program manager at Draper Aden.

The Leadership in Energy and

Environmental Design (LEED®) rating system provides a measure of performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.

The goal of LEED® Silver Certification forced project engineers to implement a complex stormwater management approach that minimized and mitigated the project's impacts on water quality. While addressing water quality issues arising from LEED®, site designers had to also ensure that runoff did not result in flooding of Henderson Hall's lower floors.

Throughout the project, Draper Aden recognized the importance of communication with the project's architect, client, and neighboring property owners. "This commitment to communication resulted in minimal changes between preliminary design layouts and final construction drawings," concludes Carolyn.



Henderson Hall on Virginia Tech's Blacksburg campus will soon get a face lift and a new purpose thanks to Draper Aden Associates' renovation project.

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Derrick Cave - Continued from page 2

What do you think are the strengths of the LDDI program?

DC: The LDDI has the ability to see how the practical application of other CEE classes can be applied to create a land development project that not only provides jobs to help stimulate our economy, but can be done in a way to enhance our environment.

The program also provides students with a skill set that, if they wish to pursue a

career in land development, will increase their marketability to firms upon graduation and place them a step above students from other universities.

What are some of your personal hobbies?

DC: When I am not at the office, I enjoy playing golf, boating, fishing and spending time with my family. I have a 10 year old son that is a big Hokie fan and, at this time, has his heart set on attending VA Tech in the future.

Sponsorship has its privileges!

Is your organization a sponsor in the LDDI at VT? When firms contribute financially to LDDI, they play an integral role in raising awareness about land development as a career path, and help to expand VT's educational efforts in land development. Check out just a few of the benefits available to your firm through sponsorship!

Platinum Level (\$5,000 annually)

- * Custom page on the LDDI website, which may include recruitment and advertising;
- * "Eye candy" project showcases on the LDDI website;
- * Annual project feature in *LDDI Bridges* newsletter;
- * Access to student resume bank;
- * Guaranteed exhibition space at VT's CEE career fair (booth fee still required).

Gold Level (\$2,500 annually)

- * Link to your website from LDDI's website;
- * Project showcases in template format on LDDI's website;
- * Access to student resume bank.

Silver Level (\$500 annually)

- * Company listing on LDDI's website (no hyperlink);
- * Ability to promote LDDI sponsorship in company literature.

Please contact Randy Dymond (dymond@vt.edu) or Kevin Young (keyoung@vt.edu) if you want to become part of the LDDI team through sponsorship, or simply send a check made payable to "Land Development Design Initiative, Inc" to:

Land Development Design Initiative, Inc.
PO Box 6002, McLean, VA 22101

LDDI boards waiting to be filled up in Patton Hall

Attention Platinum and Gold sponsors! Have an announcement for LDDI students? Got an interesting event or job opening at your firm? Then send us your notices and we will post them immediately on the new LDDI bulletin boards. The boards are located on the third floor of Patton Hall and offer maximum visibility to your materials. They are strategically located near the CEE Computer Lab entrance and face the main staircase.

You can mail your announcements to:

Land Development Design Initiative, Inc.
200 Patton Hall, Virginia Tech, Blacksburg, VA 24061

Also, you can e-mail the materials to Randy Dymond at dymond@vt.edu, or fax them to (540) 231-7532.



Kevin Young, LDDI assistant coordinator, is putting up the bulletin boards on the third floor of Patton Hall.



LDDI students will soon be able to read your announcements, employment opportunities, or any other information that is of interest to the initiative.

Photos by Ana Constantinescu